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# Petroleum Supply Monthly



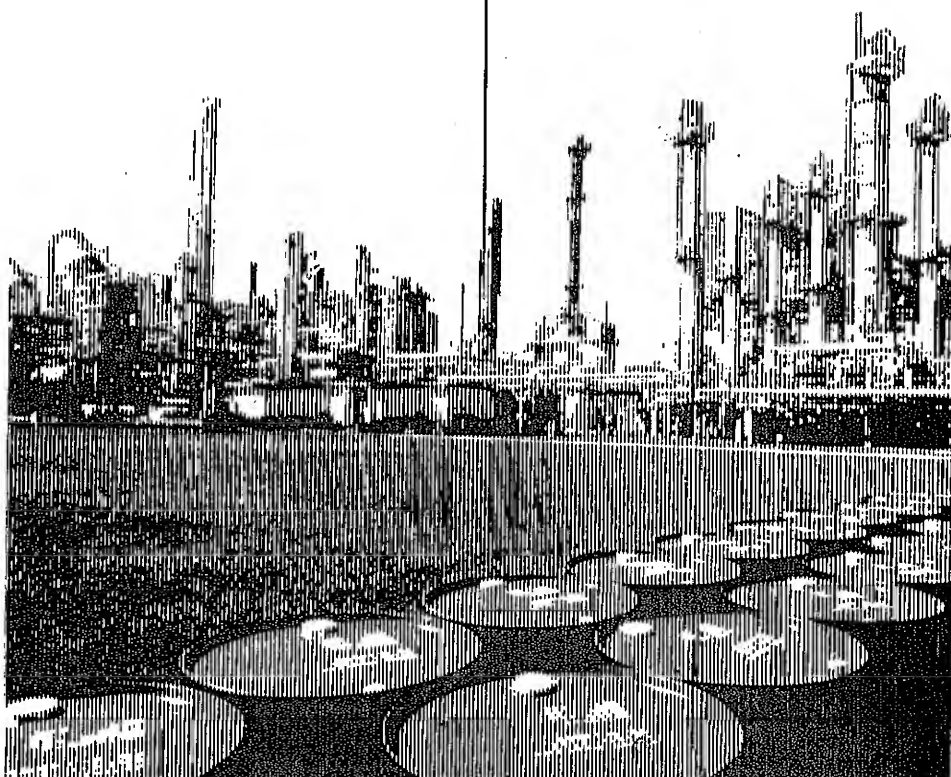
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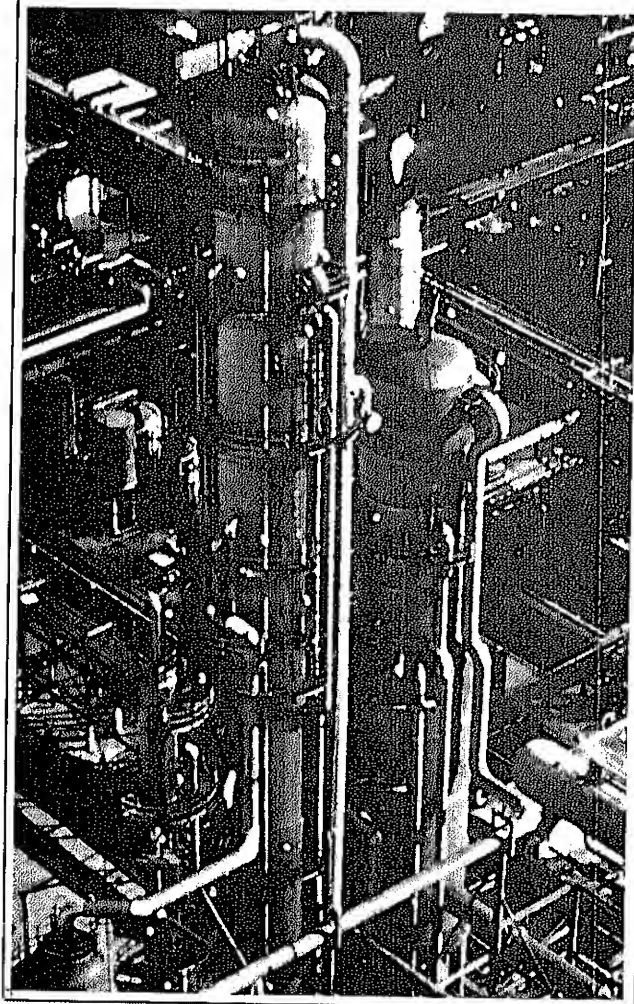
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## This Month in the PSM

This issue of the *Petroleum Supply Monthly* features a "Mid-Year Petroleum Review," beginning on page xi and focusing on major petroleum supply developments in the first half of 1984 and the outlook for the remainder of the year. The article discusses changes in consumption, domestic crude oil production, exploration and development activity, refinery operations, foreign trade, stocks (including the Strategic Petroleum Reserve), and prices. A special summary of changes in petroleum imports appears on page xv. Also in this issue is an article focusing on "Timeliness and Accuracy of Selected Petroleum Supply Data Series" for statistics published in 1983. This article begins on page xviii, and is accompanied by a box describing the Petroleum Supply Reporting System.



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# Petroleum Focus





# Petroleum Supply Summary

Average Volume for Period (in Millions of Barrels Per Day)	July			Cumulative January Through July		
	1984	1983	% Change	1984	1983	% Change
<b>Products Supplied</b>						
Motor Gasoline	7.1	6.8	4.8	6.7	6.5	2.2
Distillate Fuel Oil	2.6	2.3	13.5	2.9	2.6	11.9
Residual Fuel Oil	1.0	1.3	-19.7	1.5	1.4	0.5
Other Products	4.6	4.7	-1.7	4.7	4.3	7.9
<b>Total</b>	<b>15.3</b>	<b>15.0</b>	<b>1.9</b>	<b>15.7</b>	<b>14.9</b>	<b>5.4</b>
<b>Oil Inputs to Refineries</b>	<b>12.2</b>	<b>12.4</b>	<b>-1.2</b>	<b>12.0</b>	<b>11.5</b>	<b>4.5</b>
<b>Production</b>						
Crude Oil, Natural Gas Liquids, and Other <sup>1</sup>	10.4	10.2	1.9	10.4	10.3	0.9
<b>Imports</b>						
Crude Oil <sup>2</sup>	3.3	3.6	-8.0	3.2	2.8	12.2
SPR	0.3	0.3	12.4	0.2	0.2	-7.1
Products	1.4	1.9	-23.9	2.0	1.6	23.7
<b>Total</b>	<b>5.0</b>	<b>5.7</b>	<b>-12.2</b>	<b>5.4</b>	<b>4.7</b>	<b>15.2</b>
<b>Exports</b>						
Crude Oil	0.2	0.1	53.1	0.2	0.2	16.9
Products	0.6	0.4	50.7	0.5	0.6	-15.5
<b>Total</b>	<b>0.9</b>	<b>0.6</b>	<b>51.3</b>	<b>0.7</b>	<b>0.8</b>	<b>-8.6</b>
<b>Stock Withdrawal</b>						
Crude Oil <sup>2</sup>	0.1	0.5	—	(s)	0.1	—
Products	-0.1	-0.9	—	(s)	0.3	—
<b>Stocks at End of Period (in Millions of Barrels)</b>						
<b>Crude Oil</b>						
PR	423	341	24.1			
Other	353	335	5.5			
<b>Total</b>	<b>776</b>	<b>676</b>	<b>14.9</b>			
<b>Products</b>						
Motor Gasoline <sup>3</sup>	236	231	2.2			
Distillate Fuel Oil	125	131	-4.1			
Residual Fuel Oil	47	52	-9.4			
Other	328	338	-2.7			
<b>Total</b>	<b>736</b>	<b>751</b>	<b>-1.9</b>			
<b>Crude Oil and Products</b>	<b>1,512</b>	<b>1,426</b>	<b>6.0</b>			

<sup>1</sup>Includes alcohol and other hydrocarbon liquids.

<sup>2</sup>Includes Strategic Petroleum Reserve (SPR).

<sup>3</sup>Including blending components.

Less than 0.05 million barrels per day.

E: Percent changes are based on unrounded values. July 1984 data are estimates based on weekly data, except exports, NGL production, other hydrocarbons, and alcohol which are June 1984 monthly values. Totals may not equal to sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, June 1984.



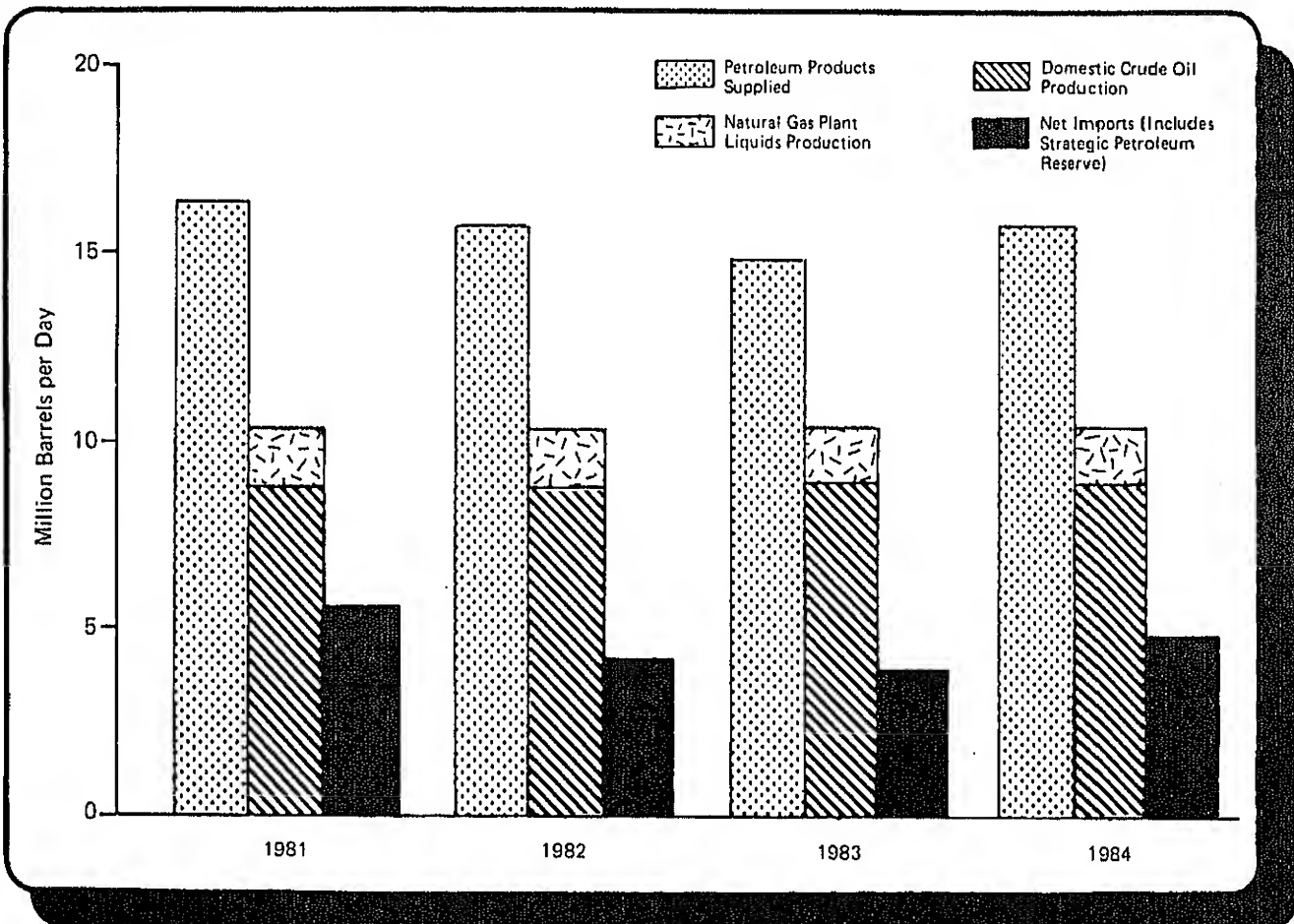
# Mid-Year Petroleum Review

Petroleum consumption in the United States during the first half of 1984 continued the upward trend which began during the last half of 1983. At that time, a turnaround in economic conditions in the United States contributed to the reversal in the 5-year downward

NOTE: Unless otherwise referenced, data in this article were taken from the Summary Statistics section of this report, *Petroleum Supply Monthly*, DOE/EIA-0109(84/06); *Petroleum Supply Annual 1983*, DOE/EIA-0340(83) Volumes 1 and 2; *Weekly Petroleum Status Report*, August 16, 1984, DOE/EIA-0208(84/33) and previous issues; *Petroleum Marketing Monthly*, DOE/EIA-0380(84/06); and *Short-Term Energy Outlook*, May 1984, DOE/EIA-0202(84/2Q). Where final data were not available, estimates were based on preliminary data.

trend in consumption. During the first 6 months of 1984, continued improvement in the economy, combined with a much colder first quarter than in 1983, spurred the increase in consumption. To supplement stable crude oil production in meeting the higher demand for petroleum products, net imports of crude oil and products increased. Motor gasoline stocks increased through May, against the usual seasonal trend, while distillate fuel oil stocks declined dramatically before replenishment began in June. Fewer refineries were operating during the first half of 1984 than during the first half of last year. This decrease in capacity, combined with higher gross crude oil inputs, resulted in improved refinery utilization. Crude oil prices remained stable, while motor gasoline prices declined from the comparable 1983 period, and heating oil prices increased. Rotary rig activity, well completions, and seismic geophysical activity showed moderate increases over the corresponding 1983 levels.

Figure 1. Petroleum Supply, January - June 1981, 1982, 1983, and 1984



Source: Energy Information Administration, "Petroleum Supply Annual," 1981, 1982, 1983; and "Petroleum Supply Monthly," 1984.  
Note: 1984 data are preliminary.



## Consumption

During the first half of 1984, U.S. petroleum consumption (measured as "petroleum products supplied") continued the upward trend which began during the last half of 1983, when consumption increased 4 percent over the first half of last year. Thus far in 1984, consumption of 15.8 million barrels per day was about 6 percent higher than for the comparable months in 1983 (see Figure 1). The continued economic improvement and a winter that was 12 percent colder than the previous one were the primary reasons for increased consumption this year. Consumption of all major products was higher this year than for the comparable 1983 period.

Motor gasoline consumption of 6.6 million barrels per day during the first half of 1984 was about 2 percent higher than for the same period in 1983 (see Table 1). The relatively high primary stock levels helped to hold motor gasoline prices close to or below the 1983 averages. Increased travel this year, combined with stable prices, contributed to the higher consumption, despite continued vehicle efficiency improvements. Record imports of motor gasoline supplemented the slightly higher refinery production to satisfy the higher motor gasoline demand during the first half of 1984.

Distillate fuel oil consumption jumped to 3.0 million barrels per day during the first half of 1984. This was the highest consumption level since the same period in 1979, and was 12 percent above the comparable 1983 level. Despite increased refinery production and higher imports, large withdrawals were needed from already low inventory levels during several months this year. The large withdrawals were necessary: first, to satisfy the surge in heating oil demand during the unusually cold winter; and second, to accommodate the increased demand for diesel fuel for transportation, construction, and farming. The high rate of consumption combined with low primary inventories, resulted in shortages in some areas,<sup>1</sup> and kept distillate fuel oil prices higher than during most of 1983.

Residual fuel oil consumption during the first half of 1984 was 1.5 million barrels per day, about 4 percent higher than the comparable 1983 level. This was also the first increase since 1979. Much of this increase was satisfied by higher imports of residual fuel oil, primarily

from the Virgin Islands (see box on page xv). Consumption during the first quarter was much higher than during the second quarter, as unusually cold weather brought a sharp increase in heating and electric utility needs.<sup>2</sup> As temperatures moderated in the second quarter, consumption dropped 25 percent from the preceding quarter. Second quarter consumption was more in keeping with the downward trend of recent years, at 3 percent below the level during the second quarter of 1983. The high price of residual fuel oil relative to prices of competing fuels has somewhat limited the effects of economic recovery on residual fuel oil consumption.

Consumption of liquefied petroleum gases (LPG's) during the first half of 1984 averaged 1.6 million barrels per day, about 8 percent higher than during the first half of 1983. As with heating oils, the unusually cold winter this year contributed to the higher demand. In addition, recovery in the petrochemical industry accounted for much of the increased demand for LPG's this year.<sup>3</sup> Both imports and stock withdrawals were higher than for the comparable 1983 period, to accommodate increased consumption.

## Supply

### Domestic Production

Domestic crude oil production during the first half of 1984 was 8.7 million barrels per day, unchanged from the comparable 1983 level, but slightly higher than in 1981 and 1982.

### Refinery Operations

#### Inputs to Refineries

The higher demand for petroleum products during the first half of 1984 required an increase in refinery production, which was about 7 percent higher than for the same period last year. To accommodate this increase,

<sup>1</sup>The Oil Daily, May 25, 1984, p. 8.

<sup>2</sup>Energy Information Administration, *Electric Power Monthly*, DOE/EIA-0226 (84/05) (Washington, D.C., July 1984), Tables 12 and 16.

<sup>3</sup>The Oil Daily, May 21, 1984, p. C3.

**Table 1. Products Supplied Summary  
(Million Barrels per Day)**

Products Supplied	First 6 months		Percent Change	Projected 1984	Actual 1983	Projected Percent Change
	1984	1983				
Motor Gasoline.....	6.6	6.5	1.8	6.6	6.6	0.3
Distillate Fuel Oil.....	3.0	2.7	11.5	2.9	2.7	6.3
Residual Fuel Oil.....	1.5	1.5	3.5	1.4	1.4	0.0
LPG's.....	1.6	1.5	7.8	} 4.7	1.5	} 6.3
Other Products.....	3.0	2.7	11.0		3.0	
<b>Total.....</b>	<b>15.8</b>	<b>14.9</b>	<b>6.0</b>	<b>15.6</b>	<b>15.2</b>	<b>3.1</b>

Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, *Petroleum Supply Annual*, 1983; *Petroleum Supply Monthly*, 1984; *Short-Term Energy Outlook*, May 1984.

**Table 2. Refinery Operations**  
(Million Barrels per Day)

Operations	Jan.- June 1982	Jan.- June 1983	Jan.- June 1984
<b>Refinery Input</b>			
Crude Oil .....	11.6	11.4	12.0
Natural Gas Liquids .....	0.5	0.4	0.5
Other Liquids .....	0.5	0.4	0.5
<b>Total Input .....</b>	<b>12.7</b>	<b>12.2</b>	<b>12.9</b>
<b>Refinery Output</b>			
Finished Motor Gasoline. . .	6.2	6.2	6.4
Distillate Fuel Oil .....	2.5	2.3	2.6
Residual Fuel Oil .....	1.2	0.9	0.9
Other Products .....	3.3	3.3	3.6
<b>Total Output .....</b>	<b>13.2</b>	<b>12.6</b>	<b>13.6</b>

Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, *Petroleum Supply Annual*, 1982, 1983; *Petroleum Supply Monthly*, 1984.

crude oil inputs to refineries rose about 6 percent from comparable 1983 levels, while inputs of other liquids remained close to the levels of recent years (see Table 2).

The average sulfur level of crude oil inputs to refineries has been increasing. This increase is related to a change in the quality of crude oils imported in recent years. Before 1982, between 30 and 40 percent of U.S. imports were lighter, low-sulfur crude oils from Saudi Arabia and Nigeria. These countries now provide about 20 percent of U.S. imports, while the portion imported from Mexico, a producer of heavier crude oils with higher sulfur content, has doubled to about 20 percent. In 1981 the average sulfur level of crude oil inputs was 0.87 percent. During the first half of 1983, the average was 0.89 percent, and this year it increased to an average of 0.94 percent.

#### Refinery Capacity Utilization

During the first half of 1984, the refinery utilization rate averaged 76 percent, compared with 69 percent for the first half of 1983. The higher rate this year was due to higher gross inputs and lower capacity, as there were fewer active refineries than during the first half of 1983. Although no refineries were shut down during the first half of 1983, 18 refineries closed during the second half of last year. The effects of these closings were only slightly offset by the reactivation of seven others during the same period. The net closings resulted in a loss of crude oil distillation capacity of 0.7 million barrels per day between the middle of 1983 and the end of the year. Despite the closing of three refineries during the first half of 1984, crude oil distillation capacity was 16.1 million barrels per day, unchanged from the capacity at the end of last year.

#### Stocks

##### Crude Oil Stocks

Crude oil stocks (excluding the Strategic Petroleum Reserve) stood at 353 million barrels on June 30, 1984,

slightly above the June 1983 level (see Table 3). During February and March, stocks were drawn down slightly, as increased refinery inputs were needed to satisfy the surge in demand for heating oils. Crude oil stocks were replenished by April and continued upward through May, before declining slightly in June. Relatively high levels of crude oil stocks (now about 30 days' supply, compared with 21 days' supply in 1978) are being maintained in order to meet demand through the use of spare refining capacity. This enables refiners to maintain low products stocks, yet still have the flexibility to meet unexpected demand.

#### Petroleum Product Stocks

Petroleum product stocks on June 30, 1984, totaled 735 million barrels, 2 percent above the June 1983 level (see Table 3). Continued stock drawdowns of fuel oils were offset by additions to motor gasoline stocks. Although high inventory carrying costs are still a contributing factor to the low total product stocks, the unusually cold weather during the first quarter and increased consumption this year by the industrial and transportation sectors were the primary reasons for the continued stock withdrawals of several major products. Despite higher refinery production and higher imports for these products, stock withdrawals from already-low levels were required to satisfy significantly higher demand than in 1983. In fact, such large drawdowns of distillate fuel oil stocks were required, that stocks fell below the minimum operating inventory level<sup>4</sup> in April and May. As a result, spot shortages occurred, notably in the Midwestern States. Motor gasoline stocks at the end of 1983 were at the lowest year-end level since 1974. During the first half of 1984, motor gasoline stocks in-

**Table 3. Ending Stocks of Petroleum**  
(Million Barrels)

Commodity	June 1984	June 1983	Percent Change
<b>Crude Oil</b>			
SPR .....	414	332	24.7
Other .....	353	351	0.6
<b>Total .....</b>	<b>766</b>	<b>683</b>	<b>12.2</b>
<b>Products</b>			
Motor Gasoline. ....	245	223	9.9
Distillate Fuel Oil .....	113	114	- 0.9
Residual Fuel Oil .....	47	50	- 6.1
LPG's .....	106	104	1.9
Other .....	224	232	- 3.4
<b>Total .....</b>	<b>735</b>	<b>723</b>	<b>1.7</b>
<b>Total Crude Oil and Products .</b>	<b>1,502</b>	<b>1,405</b>	<b>6.9</b>

Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, *Petroleum Supply Annual*, 1983; *Petroleum Supply Monthly*, 1984.

<sup>4</sup>The National Petroleum Council (NPC) defines the minimum operating inventory as the inventory level below which operating problems and shortages would begin to appear in a defined distribution system. In its 1983 study, the NPC estimated this inventory level for distillate fuel oil to be 105 million barrels.

creased substantially through May, against the usual trend of spring drawdowns. Much of the stock buildup resulted from excess production of motor gasoline, which was a coproduct in the production of distillate fuel oil. During the same period, favorable foreign motor gasoline prices resulted in higher imports, which satisfied the slight increase in motor gasoline demand.

#### Strategic Petroleum Reserve

The Strategic Petroleum Reserve (SPR), authorized under the Energy Policy and Conservation Act of 1975, is intended to reduce the impact of a severe disruption of foreign crude oil supplies to the United States. It is operational with stocks of 414 million barrels at mid-year (see Table 3). The current plan approved by Congress is to have 750 million barrels in the SPR (about 90 days total oil import equivalent at 1978 rates) by 1991. At the present import rate, stocks in the SPR at the end of June 1984 represented about 85 days' supply.

If U.S. imports of crude oil alone were cut off, SPR stocks could fill the gap between domestic production and refinery inputs for about 125 days. Currently, imports from the Persian Gulf represent about 10 percent of all U.S. oil imports. The current SPR inventory can be drawn down at varying rates over the duration of a drawdown within the constraints of the current maximum sustained drawdown rate. The SPR can currently draw down and distribute oil from the sites at either an initial average sustained rate of 2.1 million barrels per day for 3 months, or at an initial average sustained rate of 1.7 million barrels per day for a period in excess of 5 months, each alternative being followed by lower rates in subsequent months.<sup>5</sup>

Over the past 5 years, shifts in the demand for oil from Petroleum Administration for Defense (PAD) District II to PAD District III have caused the distribution plan for the SPR oil to require change. Because of the shift in demand, two of the three major pipelines intended to move SPR oil to PAD District II refineries are no longer available. An expanded distribution system capability along the Gulf Coast is in the planning stages.<sup>6</sup>

For budgetary reasons, the fill rate for SPR stocks during the first half of 1984 dropped 11 percent from the comparable 1983 rate to 190 thousand barrels per day. Of the total stocks in the SPR at mid-year, about 8 percent is from domestic sources, primarily Alaska. Approximately 35 percent of the stocks in the SPR is from Mexico, 25 percent from the United Kingdom, and about 25 percent is from OPEC countries.

## Imports

#### Total Net Imports

U.S. net imports of crude oil and petroleum products (gross imports, including imports for the SPR, minus exports) averaged 4.8 million barrels per day, 30 percent higher than during the comparable period last year (see Table 4). Because domestic production of crude oil and natural gas liquids remained about the same, virtually all of the increase in consumption was accommodated by higher imports.

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**Table 4. Net Imports of Petroleum  
(Million Barrels per Day)**

Commodity	Jan.- June 1984	Jan.- June 1983	Percent Change
Crude Oil			
SPR .....	0.2	0.2	-11.1
Other .....	3.0	2.5	17.4
Total .....	3.2	2.8	15.1
Products			
Residual Fuel Oil .....	0.6	0.5	31.9
Motor Gasoline .....	0.3	0.2	40.2
Distillate Fuel Oil .....	0.2	0.0	1,346.7
LPG's .....	0.2	0.1	65.0
Other .....	0.3	0.1	166.7
Total .....	1.6	0.9	75.5
<b>Total Crude Oil and Products</b> ..	<b>4.8</b>	<b>3.7</b>	<b>30.0</b>

Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration, *Petroleum Supply Annual*, 1983; *Petroleum Supply Monthly*, 1984.

#### Crude Oil Imports

Net imports of crude oil, excluding the SPR, during the first half of 1984 averaged 3.0 million barrels per day, 17 percent above the comparable 1983 level, when high foreign crude oil prices and low domestic demand brought crude oil imports to their lowest level since 1972. The higher imports this year are associated with a 15 percent lower price than in early 1983, with the need to supplement crude oil production to meet higher product demand, and with the need to rebuild crude oil stocks so that refiners can maintain flexibility in meeting unexpected demand. During the first 6 months of 1984, imports accounted for about 25 percent of the refinery inputs, compared with 22 percent during the first 6 months of 1983.

Gross imports of crude oil, including imports for the SPR, this year averaged 3.4 million barrels per day, compared with 2.9 million barrels per day during the first half of 1983 (see box on page xv). Crude oil imports for the SPR averaged 0.2 million barrels per day, approximately 6 percent of all U.S. crude oil imports, compared with 7 percent during the first half of 1983.

#### Product Imports

During the first half of 1984, net imports of petroleum products averaged 1.6 million barrels per day, higher than at any time since 1979. This average was about 76 percent higher than the comparable 1983 average and about 14 percent higher than during the last half of 1983.

<sup>5</sup>U.S. Department of Energy, Office of the Deputy Assistant Secretary for the Strategic Petroleum Reserve.

<sup>6</sup>*The Wall Street Journal*, May 24, 1984, Section 2.

# Changing Patterns of Petroleum Imports

## Crude Oil

Crude oil imports increased moderately during the first half of 1984 from the comparable 1983 period, as improved economic conditions contributed to higher demand for petroleum. The entire increase was due to higher crude oil imports from the Organization of Petroleum Exporting Countries (OPEC). Imports declined dramatically between early 1980 and early 1983, in association with the drop in petroleum demand during that time. Imports from OPEC countries plummeted during that period, while supplies from non-OPEC countries grew.

The doubling of foreign crude oil prices between early 1979 and early 1980 contributed to the dramatic downward trend in imports, which ended during the first half of 1983. In early 1983, foreign crude oil prices decreased moderately and U.S. petroleum demand began to rise in association with the economic turnaround. Crude oil imports then began to increase, and remained higher during the first half of 1984 than for the same period in 1983.

U.S. reliance on OPEC countries for crude oil was drastically reduced between early 1980 and early 1984. In early 1980, OPEC countries provided three-quarters of all crude oil imports; so far this year, they accounted for about 45 percent. While the share of total crude oil imports from non-Arab OPEC countries was about 25 percent throughout this period, the share from Arab OPEC countries fell from 48 percent in early 1980 to 11 percent in early 1983, before increasing to about 19 percent this year.

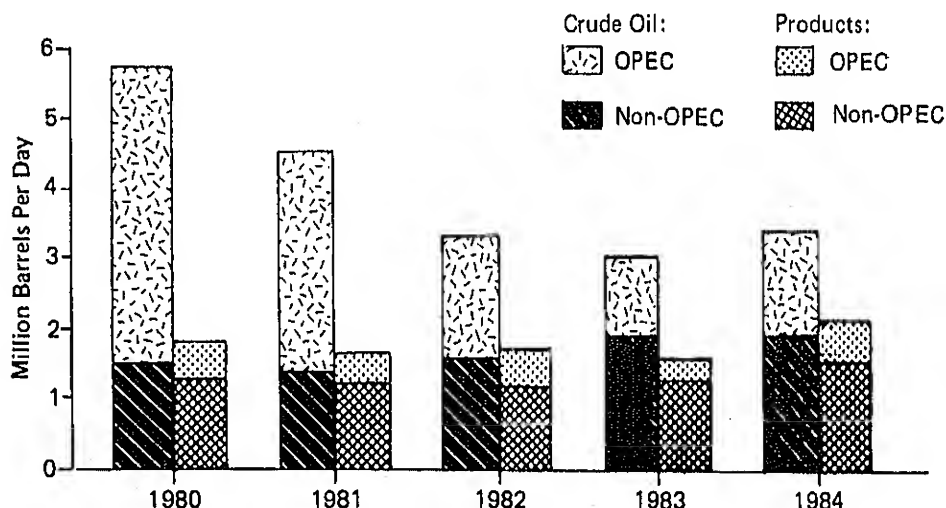
Crude oil imports from non-OPEC countries grew 25 percent between 1980 and 1983, and have been stable in the first half of 1984. Imports from Mexico increased 28 percent between early 1980 and this year. Mexico now represents about 20 percent of all crude oil imports; Canada and the United Kingdom together account for about 20 percent. In 1980, the combined share from these three countries was only 17 percent.

## Petroleum Products

Gross imports of petroleum products averaged about 1.6 million barrels per day from early 1980 to early 1983, before increasing substantially this year. Product imports in early 1980 represented 23 percent of all imports; by early 1983 they accounted for 35 percent. During the first half of 1984, product imports grew more than crude oil imports, constituting about 38 percent of the total. Residual fuel oil and LPG's together accounted for 75 percent of all products imported in 1980; now residual fuel oil and motor gasoline together account for about 51 percent of product imports.

Throughout this 5-year period, Canada and the Virgin Islands have been the major suppliers of foreign products. In 1980 they accounted for about 40 percent of the product imports, compared with about 30 percent this year. OPEC countries accounted for about one-fourth of the product imports throughout this period. Imports from Arab OPEC countries, however, have grown from 2 percent in early 1980 to about 9 percent during the first half of 1984. Product imports from Arab OPEC countries are expected to grow even more, as refinery production in these countries increases.

## Gross Imports of Crude Oil and Petroleum Products, by Source, January-June 1980-1984



Source: Energy Information Administration, "Petroleum Supply Annual" and predecessor reports, 1980, 1981, 1982, 1983; and "Petroleum Supply Monthly", 1984.

Note: 1984 data are preliminary.

As demand for major products increased during the last half of 1983, increased imports replaced large stock withdrawals as the primary means of supplementing domestic production to meet higher product demand. This year, even though product imports increased significantly, the surge in demand for some products required further drawdowns from low stock levels to supplement production and net imports.

All major products showed substantial increases in net imports over 1983 levels. Imports of residual fuel oil, the principal product imported, increased during the first half of 1984; they had been declining for the previous 7 years. Its share of total net imports dropped to about 39 percent this year from 52 percent in the comparable 1983 period, as net imports for all other products increased solidly. Imports this year were highest in January and February to accommodate higher demand for winter heating fuels.

Net imports of motor gasoline, distillate fuel oil, and LPG's are small by comparison to residual fuel oil imports, but notable changes have occurred in recent years.

Motor gasoline imports have been rising since early 1982 and have been at record levels since the middle of 1983. This year motor gasoline imports represented over 4 percent of product supplied; historically they have accounted for only 2 or 3 percent.

Net imports of distillate fuel oil have averaged about 7 percent of product supplied since the middle of 1983, but accounted for practically none during 1982 or the first half of 1983. During that period, refiners drew down distillate fuel oil stocks to satisfy declining demand as a means of reducing high carrying costs. They also cut back refinery production and kept imports near minimum levels. Unusually cold weather at the beginning of 1984 and increased transportation use of diesel fuel contributed to an 11-percent rise in distillate fuel oil demand over comparable 1983 levels. With little cushion in distillate fuel oil stock levels, higher imports were needed to supplement refinery production.

Net imports of LPG's also grew substantially during the first half of 1984, primarily as a result of much lower exports than a year earlier. In early 1983, U.S. exports of LPG's had helped to fill the demand created when Saudi Arabia reduced its crude oil production (directly related to LPG production). Demand for LPG's also shot upward during the first half of 1984 due to a combination of colder weather and increased petrochemical industry activity. Stock drawdowns and imports both increased in order to meet the higher demand.

Gross imports of petroleum products of 2.1 million barrels per day were 34 percent higher during the first 6 months of 1984 than in the comparable 1983 period (see box on page xv), and 12 percent higher than during the second half of last year. Although gross product imports increased substantially this year, net imports increased even more because of lower exports. A 28-percent drop in product exports (primarily residual fuel oil and petroleum coke) during the last half of 1983, to 0.5 million barrels per day, was associated with the strengthened position of the U.S. dollar against foreign

currencies. Exports remained at the same level during the first half of 1984 and were the principal factor in the 76-percent increase in net imports.

## Exploration and Development

U.S. drilling activity, which showed gradual recovery during the last half of 1983, has been running higher each month during the first half of 1984 than for the comparable 1983 months. In April, normally the low point for drilling activity, 15 percent more rotary rigs were operating than in April 1983. The average number of rigs operating so far this year was 12 percent higher than for the same period in 1983. Drilling activity is expected to increase during the remainder of 1984.<sup>7</sup>

Geophysical activity, a leading indicator of future oil and gas exploration activity, was also higher during the first half of 1984 than for the corresponding 1983 period. Even though bad weather contributed to a moderate decline in the number of seismic crews searching for oil and gas in March, the seismic crew count of 471 was 5 percent higher than the March 1983 level, which was the low point last year. Seismic crew activity in the United States and on its Outer Continental Shelf rose slightly in April 1984, and increased sharply in May and June. Of the 500 active crews in June, 455 were land crews and 45 were on marine vessels.<sup>8</sup>

Well completions during the first 6 months of 1984 were about 4 percent higher than during the comparable 1983 period. This was about 7 percent lower than the record number drilled during the first half of 1982 (see Table 5). The total footage of completed wells also increased. The average depth per well completed so far this year was 4,313 feet, slightly deeper than the average depth during the same period in 1983. Oil wells ac-

Table 5. Drilling Activity

Item	Jan.- June 1982	Jan.- June 1983	Jan. June 1984
Average Number of Rigs Operating <sup>1</sup> .....	3,660	2,095	2,349
Total Wells Drilled <sup>2</sup> .....	43,666	38,907	40,466
Exploratory .....	8,791	7,544	7,347
Development .....	34,875	31,363	33,119
Oil .....	20,583	18,431	20,238
Gas .....	9,225	8,070	7,535
Dry Holes .....	13,858	12,406	12,693
Average Depth per Well (feet) .	4,819	4,291	4,313

<sup>1</sup>Hughes Tool Company, *Rotary Rigs Running—By State*, (Houston, Texas: 1982-1984).

<sup>2</sup>American Petroleum Institute, *Report on Drilling Activity in the United States*, (Washington, D.C.: January 1982-June 1984).

<sup>7</sup>Austin, Thomas S., Jr., Hughes Tool Company, Houston, Texas, presentation before the Independent Petroleum Association of America Supply and Demand Committee, May 1984.

<sup>8</sup>Society of Exploration Geophysicists, News Release, (Tulsa, Oklahoma: July 5, 1984).

counted for half of the well completions, dry holes for about one-third, and gas wells for about one-fifth.<sup>9</sup>

## Price Trends

### Crude Oil Prices

Crude oil prices at the end of June 1984 remained close to \$29 per barrel. Prices dropped from \$34 per barrel to this level in March 1983, in reaction to pressures caused by weak world petroleum demand, reliance on stock withdrawals rather than imports to meet demand, and excess world crude oil production capacity. During the first half of 1984, conflicting factors held crude oil prices near the \$29 level. Downward pressure related to the excess world crude oil production capacity was offset by increasing world demand for petroleum, and stock drawdowns as a means of meeting demand were not as prevalent. Uncertainty caused by the recent threat of a supply cutoff from the Persian Gulf, which provides about 20 percent of the free world's supply of oil, has not caused a rise in crude oil prices, primarily because the accumulated strategic crude oil stocks outside the Persian Gulf are perceived to be adequate to counter such a disruption.<sup>10</sup>

The refiner acquisition cost of crude oil, which was \$35.03 in June of 1981 (see Table 6), averaged \$28.77 in June 1984. This was very close to the average price that held throughout most of 1983.

**Table 6. U.S. Average Petroleum Prices**

Petroleum Prices	June 1981	June 1982	June 1983	June 1984
(Dollars per Barrel)				
Refiner Acquisition Cost of Crude Oil				
Domestic.....	34.20	30.79	28.67	28.58
Imported.....	37.03	33.79	29.23	29.19
Composite.....	35.03	31.74	28.85	28.77
(Cents per Gallon)				
Motor Gasoline, All Types, Retail.....	136.2	129.6	126.1	121.4
No. 2 Heating Oil, Retail.....	120.9	116.2	106.0	p107.0

<sup>9</sup>1983 and 1984 prices exclude taxes.

p = preliminary.

Sources: Energy Information Administration, Form 14, "Refiners' Monthly Cost Report;" Form EIA-9A, "No. 2 Heating Oil Supply/Price Monitoring Report;" Form EIA-782A, "Monthly Petroleum Product Sales Report;" and Form EIA-782B, "Monthly No. 2 Distillate Sales Report." Motor gasoline prices: Bureau of Labor Statistics.

### Petroleum Product Prices

In a counterseasonal move, average motor gasoline retail prices fell to 121.4 cents per gallon in June, 4 percent lower than for the same period of 1983, and 11 percent below the June 1981 prices. Steady increases in motor gasoline primary stocks during the first half of 1984 contributed to lower prices, assuring abundant supplies to meet the expected higher demand during the summer driving season.

The surge in heating oil demand during the unusually cold winter of 1984 prompted sharp rises in the retail price of residential heating oil during January and February. By February, the price was 10 percent higher than at the end of last year, and 5 percent higher than in February 1983. After peaking in February this year, prices declined each month through June, but remained higher than during the corresponding months of 1983. The residual effects of the winter price rise, along with continued tight supplies of distillate fuel oil, contributed to the higher prices this spring.

The residual fuel oil price is related to the international market price, because almost half of the residual fuel oil supplied is from foreign sources. Associated with increased demand for residual fuel oil at foreign utilities at times during the past year, residual fuel oil prices on the spot market have been close to, or higher than, the price of crude oil. Increased international demand, combined with the higher U.S. demand during the first quarter of 1984 to accommodate increased heating needs, has kept the residual fuel oil price close to \$29 per barrel. During the first half of 1983, residual fuel oil prices on the spot market were substantially below crude oil prices.

### Outlook

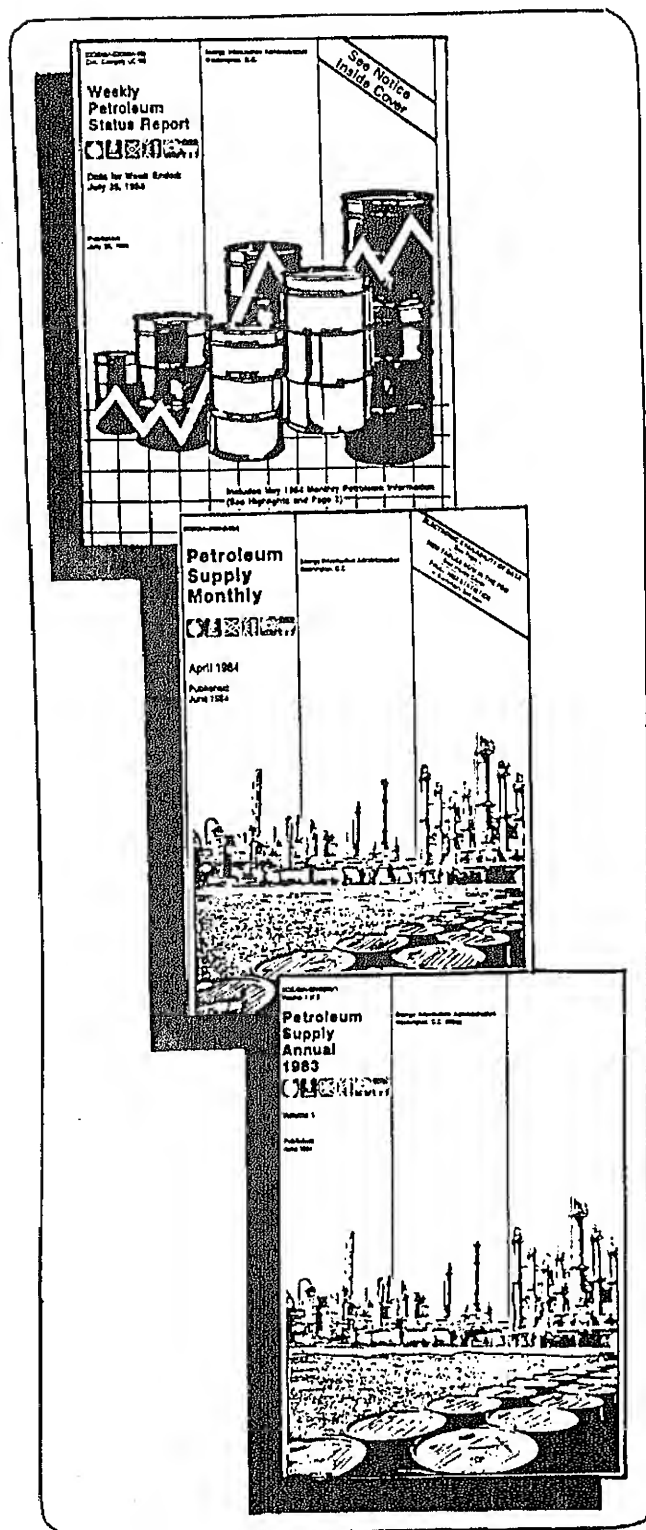
A return to normal weather and a slower rate of economic improvement are expected during the last half of 1984. These two factors should change the trends that developed during the first half of the year to some degree. The outlook for the remainder of 1984 follows:

- Consumption of petroleum products will be a little higher than for the comparable 1983 period.
- Domestic crude oil production will remain close to 8.7 million barrels per day for the remainder of the year.
- Crude oil and product prices are expected to remain relatively stable, with some seasonal variations.

<sup>9</sup>American Petroleum Institute, *Report on Drilling Activity in the United States*, (Washington, D.C.: January 1982-June 1984).

<sup>10</sup>*The Oil Daily*, April 27, 1984, p. A3.

# Timeliness and Accuracy of Selected Petroleum Supply Data Series



The Petroleum Supply Division (PSD) of the Energy Information Administration (EIA) operates an information collection and dissemination system that includes weekly, monthly, and annual surveys. The monthly surveys are complete censuses of the operators of facilities that provide the primary supply of petroleum products in the United States (refineries, bulk terminals, pipelines, importers, etc.). These monthly surveys gather detailed information on production, stocks, imports, and flows of crude oil and a wide range of petroleum products. The weekly surveys collect data on the most important petroleum variables from selected samples of petroleum industry members. Weekly data are intended to serve primarily as leading indicators of the monthly statistics.

From 1981 through 1983, several significant changes were made to enhance petroleum data collection, processing systems, and publications. The effects of these changes on the quality of preliminary statistics can be assessed now that final statistics have been compiled and published in the 1983 *Petroleum Supply Annual* (PSA).

This article describes the enhancements which were implemented in the past 3 years. Also, it looks at the types of errors the petroleum data are subject to. Finally, it presents an assessment of the accuracy of weekly and monthly published statistics in 1983, compared with their accuracy in prior years. The article concludes that the quality of most data series has been maintained or improved, even as processing time schedules have been compressed.

## Enhancements to PSD Data

On October 1, 1977, with the formation of the EIA, units from the Bureau of Mines (BOM), the Federal Energy Administration (FEA), and the Federal Power Commission (FPC) were merged together. The data systems dealing with petroleum supply data were developed independently by each of these agencies. During the first several years of EIA's existence, improvements were made in these systems, but it was not until the formation of the Petroleum Supply Division (July 1981) that a comprehensive approach to the integration of these diverse systems was undertaken.

Within the first year, the entire processing system was redesigned and the Petroleum Supply Reporting System (PSRS) was created (see box). Eleven publications were consolidated into three: *Weekly Petroleum Status Report* (WPSR), *Petroleum Supply Monthly* (PSM), and *Petroleum Supply Annual* (PSA). Surveys and processing procedures were scheduled so they would fit together to produce these three reports smoothly. In doing so, duplication was eliminated, the



# Petroleum Supply Reporting System

The information gathered by the Petroleum Supply Reporting System (PSRS) is used to determine the supply and disposition of crude oil, petroleum products and natural gas liquids. These statistics are published in the "Weekly Petroleum Status Report" (WPSR), the "Petroleum Supply Monthly" (PSM), the "Petroleum Supply Annual" (PSA), the "Monthly Energy Review" (MER), and the "Annual Energy Review" (AER). In addition, selected statistics from the PSRS are available free to the public through EIA's Electronic Publication System (EPUB). The PSRS is the most comprehensive source of petroleum supply statistics currently available.

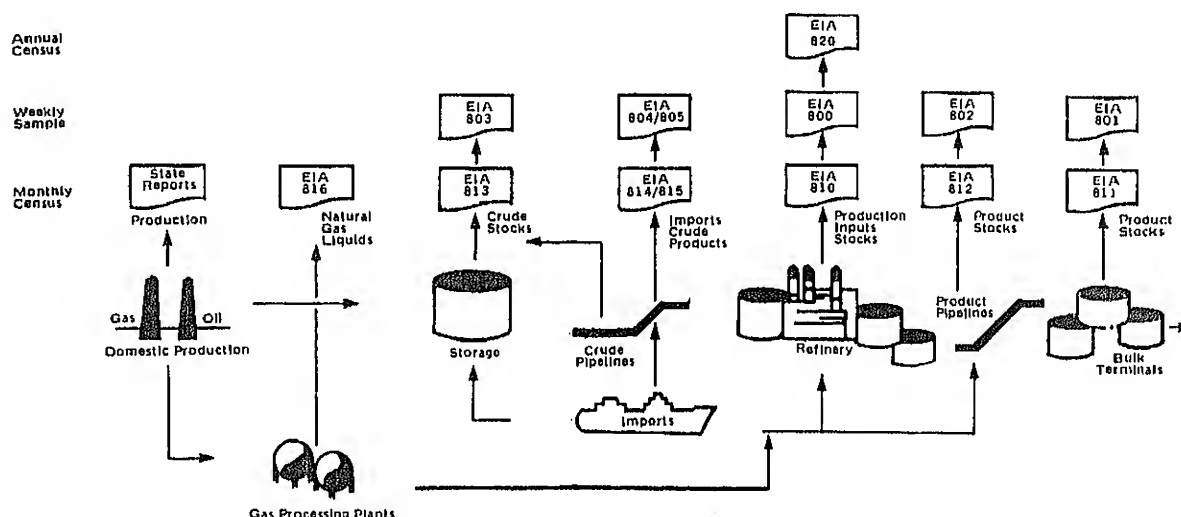
The PSRS consists of one annual, eight monthly, and six weekly surveys which collect information on domestic production, inventories, imports, and movements of petroleum (see figure below). Data from these surveys are supplemented by the Census Bureau's IM-145 tabulation which provides information on imports of liquefied petroleum gases and the Census Bureau's EM-522 tabulation which provides information on petroleum exports. EIA's crude oil production data are based on information collected by State agencies and the U.S. Geological Survey.

The PSRS has seven sampling frames for different sectors of the petroleum industry: refineries and mechanical blenders, bulk terminals with a capacity of 50,000 barrels or more, product pipelines, holders of crude oil stocks having possession of 1,000 barrels or more, petroleum importers, gas processing plants, and tanker and barge companies. The petroleum universes are relatively small and everchanging due to company births, deaths, mergers, and splits. All frames are updated continuously. Investigations of the adequacy of the frames are conducted periodically.

The annual and monthly surveys are complete censuses. The weekly surveys are collected from 90 percent cut-off samples selected from the universes of those units that report to the monthly surveys. Unlike the monthly surveys which collect data on as many as 50 variables, the weekly surveys collect data only on crude oil, motor gasoline, jet fuel, distillate fuel oil, and residual fuel oil. Most of the data reported in the weekly surveys are estimated by the reporting companies, while data reported in the annual and monthly surveys are based on company accounting records. Inventory data are reported as of the end of the reference period. Data on imports, inputs, outputs, and movements of crude oil and petroleum products between PAD Districts show the total volume of activity for the reference period. All quantities are reported in thousand barrels (42 U.S. gallons). Zeros often dominate the responses; i.e., not all of the units produce and/or store all products. The distributions of the petroleum supply variables are highly skewed; i.e., there are many small units and few large ones.

The reference period for the weekly surveys extends from 7 a.m. Friday to 7 a.m. the following Friday. These data are published in the "WPSR" on Thursday following the close of the reference week. The reference period for the monthly surveys begins 12 a.m. of the first day of the month and ends midnight of the last day of the month. These data are published in preliminary form in the "PSM," 60 days after the close of the reference month. Data resubmissions are required whenever an error greater than 5 percent of the true value is discovered by a respondent, or if requested by the EIA to correct internal inconsistencies. Final data, reflecting any necessary corrections, and the results of the annual survey (Form EIA-820, "Annual Refinery Report") are published in the PSA, 6 months after the close of the calendar year.

## Principal Petroleum Supply Survey Forms





number of revisions was substantially reduced, inconsistencies in the publications were eliminated, and it became easier for users to locate and use the data produced.

On July 14, 1983, EIA began to publish weekly data in the *WPSR* on the Thursday following the report week. Prior to that time, the *WPSR* was published on the Friday following the report week. This change requires completion of final data estimates one day earlier. Also, EIA discontinued revising the published weekly estimates.

The *PSM* now publishes monthly data 60 days after the end of a report month. Prior to the *PSM* consolidation, data appeared in the *Monthly Petroleum Statistics Report (MPSR)* 60 days after the end of a report month and in the *Monthly Petroleum Statement (MPS)* 90 days after the end of the report month. The *MPS*'s time schedule allowed revisions to reflect company resubmissions and corrections, inclusion of data from companies that were nonrespondents at the last publication, and correction of data processing errors. While the time lag for publication of monthly data in the *PSM* is virtually the same as in the *MPSR*, the *PSM* presents more comprehensive statistics than previously provided in the *MPS*. Monthly estimates derived from weekly data are also published in the *PSM* 30 days after the end of a report month.

Final monthly data are now published in the *PSA* 6 months after the close of the calendar year. Prior to the March 1982 consolidation, final data were published in the *Annual Petroleum Statement (APS)* 9 months after the close of the calendar year.

Beginning with the reporting of January 1983 data, new revised survey forms were implemented. (A detailed explanation of all the changes made to the survey forms is contained in the March 1983 *PSM*.) Consistency among weekly, monthly, and annual survey forms was enhanced by using a single set of definitions, consistent reporting instructions, identical product codes, and common company and facility identifiers.

A major update to the survey frames was implemented in January 1983, based on results of a study begun in 1981. Operators of 160 bulk terminals, 15 pipelines, and 30 crude oil stock holders were added to the respective frames. In addition, 50 facilities that reported to the "Natural Gas Liquids Operations Report" were transferred to the bulk terminal frame. EIA's estimates of total stocks of petroleum products increased 2.2 percent as a result of this change.

In January 1983, a new processing system was implemented for all of the weekly surveys. An automated

editing procedure was implemented to validate facility-level data for each of the weekly surveys. Also, an automated procedure was implemented to impute for missing or faulty data. Prior to this, nonrespondents were treated as nonsampled units. Major changes to the weekly imports data estimation procedures were also implemented. In March 1983, new samples were drawn for the weekly surveys to reflect the expanded frames. Along with the new samples, new sample control procedures were implemented to maintain the appropriate level of coverage and to ensure that the weekly and monthly data remain consistent.

In March 1983, a new processing system was implemented for all of the monthly surveys. Imputation procedures used for nonresponse in the monthly surveys since 1976 were revalidated and additional automated edit procedures are now being implemented.

In an effort to improve the quality of petroleum supply data, an on-going comparison of data submitted by individual companies on the weekly and monthly forms is routinely conducted. Historical reporting patterns for both monthly and weekly surveys are compared, and facilities that systematically report different values on the weekly and monthly surveys are identified. Letters are sent to those companies showing a large average difference in monthly and weekly reporting for three or more products over a period of 12 months and large differences (in the same direction) over the most recent 2 months. Companies with major sustained discrepancies for one or two products are contacted by phone.

To monitor values of key variables reported in the weekly and monthly surveys, graphical comparisons are drawn between published monthly data for a particular variable and the monthly value derived from weekly data for that variable.

Last, but not least, is the implementation of a system for documenting the steps being taken to improve data quality. A "Quality Control Notebook" is prepared to summarize current activities, evaluate current data quality, and establish an agenda for future enhancements or studies.

### Sources of Error

In evaluating the accuracy of a survey, it is necessary to distinguish two sources of errors: sampling and non-sampling errors.

#### Sampling Error

Sampling errors are unavoidable when estimates are based on a sample and not on the whole universe. Nevertheless, they can be controlled within limits fixed in advance, and they can also be estimated objectively from the sample itself. Weekly estimates, all based on samples, are subject to this type of error. This accounts for part of the difference between published weekly

estimates and final annual figures. However, the fact that the sample accounts for 90 percent or more of the aggregates being estimated assures small sampling errors.

## Nonsampling Errors

These errors can be classified into two groups—random types of errors whose effects nearly cancel out, and nonrandom types which tend to remain more-or-less fixed and constitute a systematic error. Both weekly and monthly data are subject to nonsampling errors. Four of the main contributing causes of these errors are as follows:

1. **Frame error:** PSRS frames are continually reviewed and updated in order to reduce undercoverage. In general, faults in the frames are small compared to other errors.
2. **Nonresponse error:** PSRS surveys have very high response rates. The response rates are usually above 95 percent for the weekly surveys and are always above 98 percent for the monthly surveys. Missing or faulty weekly data are imputed using the exponentially smoothed average of respondent's past reported values. The monthly processing system uses the data reported in the previous month as the imputed value for the missing data for all surveys except the Import survey. Because of the high rates of response and the use of imputation procedures, nonresponse error has a negligible impact on PSRS data accuracy.
3. **Processing error:** Data keying into computer files presents another opportunity for error; for example, two digits may be transposed or a datum may be entered in the wrong cell. Depending on their magnitude, some of these clerical errors may be detected by automated edit procedures that check current data for consistency with past data and for internal consistency; e.g., totals equal to the sums of the parts. However, processing errors cannot always be detected, especially if they are of small magnitude.
4. **Response error:** Response or reporting error (the difference between the true value and the value reported on the survey form) is the major factor affecting the accuracy of PSRS data and, in particular, preliminary data. Most discrepancies between preliminary and final data are due to reporting errors. Reporting errors can take many forms. For example, human errors may also occur when figures are written on forms by respondents. Often these mistakes can be detected and resolved by editing procedures. Sometimes, company records are not finalized at the time monthly survey forms are due and respondents submit preliminary estimates. This error is noticeable in Import data because final company Import records are not available until forms have been verified by the U.S. Customs Service. These errors may cause large discrepancies between

preliminary and final data. Most companies can only report estimates for weekly data. Any error in these estimates will affect the accuracy of weekly data. Sometimes product identification changes during the period between weekly and monthly data submissions. For example, a respondent may initially report the production of oil as residual fuel oil on the weekly form and later decide to process it further. When he files his monthly form, he may record the same oil as unfinished oil, since it is no longer regarded as residual fuel oil. This change again affects the accuracy of the weekly data.

## Data Assessment

This section tracks the change in accuracy of PSRS data as the data move from preliminary publication (*PSM*) to final publication (*PSA*). In addition to preliminary monthly data, the *PSM* reports monthly estimates derived from the weekly data for the most recent month (see Explanatory Note 8 in this publication). Monthly-from-weekly estimates (*MFW*) are also compared with preliminary (*PSM*) and final (*PSA*) monthly data as part of on-going data quality activities.

Before proceeding, it is important to keep in mind three points. First, weekly data, based on estimates provided by a sample of companies, were intended to serve primarily as leading indicators of the monthly data and were never expected to have the same level of accuracy. Second, the method used to derive the monthly-from-weekly estimates assumes that input, production, and stock addition or withdrawal are constants across each day of the week. Accuracy of these monthly-from-weekly estimates depends on the realization of the assumption. Third, final monthly data are still subject to errors. However, these final data accommodate revisions made by respondents following thorough review and editing by government and company statisticians and are considered to be the most accurate data available.

In order to assess the accuracy of monthly estimates developed from weekly data (*MFW*) and preliminary monthly values (*PSM*), they are compared with the final monthly values (*PSA*). The *error* for a given value is the difference between interim monthly value (*MFW* or *PSM*) and the final monthly value (*PSA*). The *percent error* is the error multiplied by 100 and divided by the final monthly value. *Absolute mean error* is the average of the absolute values of the errors over 12 months. *Absolute mean error* provides a measure of the average magnitude of revision which occurred over the year for a particular data series. *Absolute mean percent error* is the average of the absolute values of the percent errors over 12 months. *Absolute mean percent error* provides a measure of the average error relative to the aggregate being measured. Table 1 displays absolute mean errors and absolute mean percent errors of monthly-from-weekly estimates and preliminary monthly values for 30 petroleum variables for 1982 and 1983.

Table 1 shows that the majority of data series have improved in 1983. Except for refined product imports, absolute mean percent errors for all preliminary monthly data (PSM) are less than 2 percent. For the monthly-from-weekly estimates, absolute mean percent errors of residual fuel oil imports, production and stocks are high (4.80 to 6.59 percent). Absolute mean percent errors of refined product imports are also high; however, for most products, the volume of imports is relatively small.

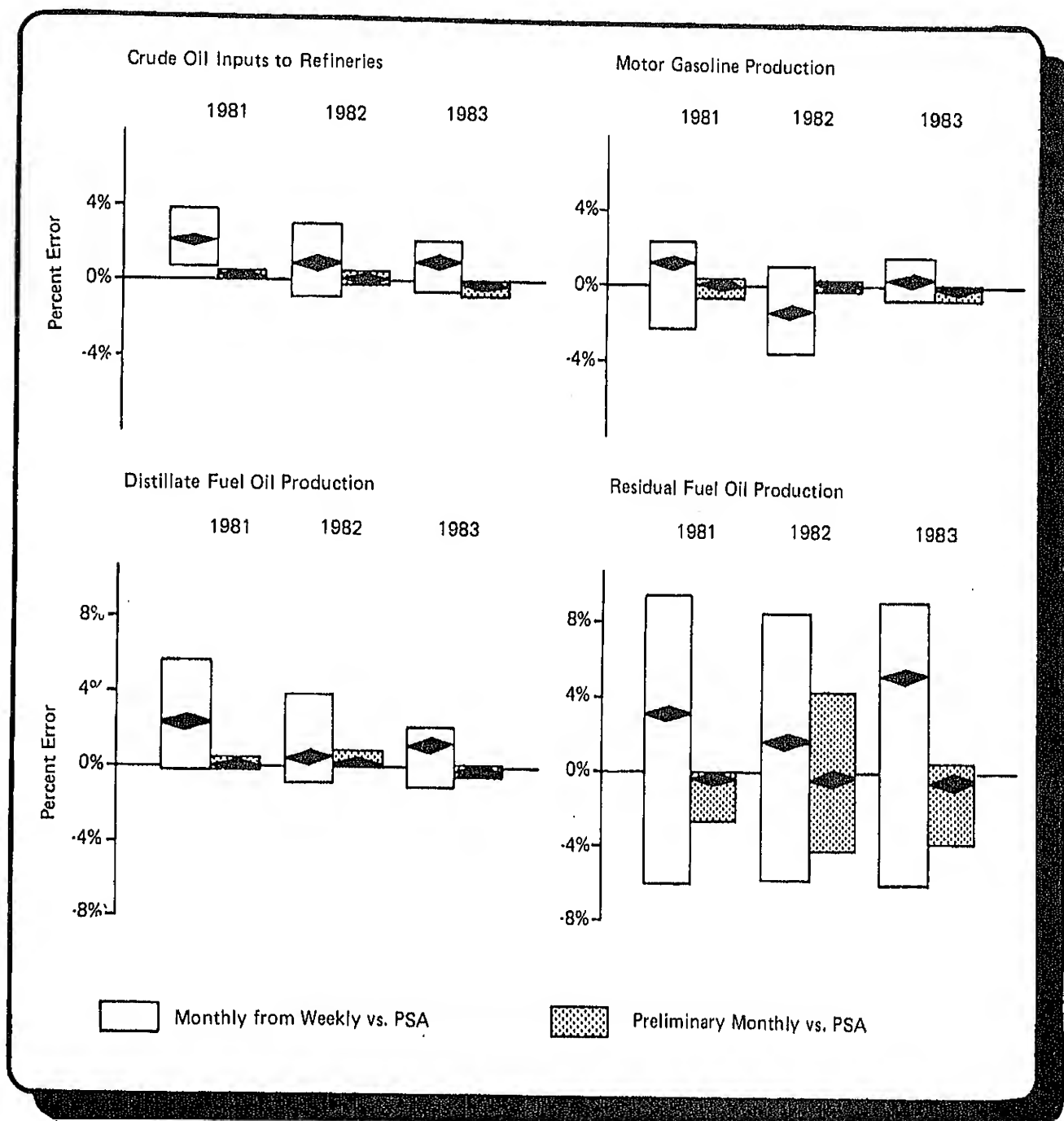
Highlights of interim (MFW and PSM) and final (PSA) monthly data comparisons are presented in Figures 1 through 3 for selected petroleum data series—stocks and inputs of crude oil; production and stocks of motor gasoline, distillate fuel oil, and residual fuel oil; and imports of crude oil and petroleum products. These data series were carefully selected for analysis and target improvement in 1982, because of their relative size, and because other major variables (such as the product supplied series) are generated from them.

**Table 1. Summary Statistics of Differences in Reporting Between Interim Publications and Petroleum Supply Annual in 1982 and 1983**

Variable	Monthly-from-Weekly Estimates				Preliminary Monthly Data			
	Absolute Mean Error*		Absolute Mean Percent Error		Absolute Mean Error*		Absolute Mean Percent Error	
	1983	1982	1983	1982	1983	1982	1983	1982
Total Products Supplied..	303	340	1.95	2.22	74	50	.49	.32
Refinery Output.....	249	180	1.96	1.35	23	14	.17	.10
Crude Input .....	112	127	.97	1.08	12	10	.13	.09
Crude Production .....	84	29	.97	.33	80	47	.93	.55
Total Imports .....	171	406	3.84	8.18	66	72	1.37	1.45
Crude Imports .....	119	153	3.85	4.50	35	29	1.17	.89
Product Imports .....	173	272	10.27	16.64	36	44	2.06	2.73
Gasoline Imports.....	29	34	11.02	17.38	10	11	4.56	5.43
Distillate Imports.....	22	27	13.18	27.90	5	2	3.46	1.60
Residual Imports.....	46	97	6.59	12.68	10	19	1.36	2.66
Jet Fuel Imports .....	10	10	32.83	38.25	4	2	12.67	6.77
Other Products Imports ..	89	152	15.00	28.90	21	13	3.67	2.40
Gasoline Supplied.....	94	200	1.41	3.01	27	36	.42	.56
Distillate Supplied.....	75	101	2.62	3.87	20	25	.74	.86
Residual Supplied.....	91	108	6.16	6.35	19	27	1.32	1.45
Jet Fuel Supplied .....	39	31	3.72	3.09	11	7	1.10	.70
Other Products Supplied .	210	161	6.12	4.75	55	43	1.64	1.29
Gasoline Production.....	32	97	.49	1.54	10	11	.16	.17
Distillate Production....	31	29	1.27	1.11	3	6	.13	.25
Residual Production.....	41	39	4.80	3.68	7	13	.78	1.16
Jet Fuel Production.....	14	16	1.39	1.61	3	1	.27	.14
Other Product Production	199	122	8.53	5.04	6	5	.26	.23
Total Stocks.....	7,618	10,753	.69	.95	3,543	2,560	.32	.22
Product Stocks .....	9,607	5,459	1.28	.70	1,231	2,489	.16	.32
Crude Stocks .....	4,646	10,017	1.34	2.82	3,205	1,219	.92	.34
Gasoline Stocks .....	3,035	2,687	1.33	1.16	563	1,100	.24	.46
Distillate Stocks .....	1,448	3,795	1.09	2.60	476	552	.33	.42
Residual Stocks .....	2,607	1,956	5.11	3.24	143	172	.28	.29
Jet Fuel Stocks .....	821	447	1.98	1.11	422	93	1.03	.24
Other Products Stocks...	5,773	6,815	2.00	2.25	1,099	1,242	.39	.41

\*All absolute mean errors are reported in thousand barrels per day, except stock data, which are reported in thousands of barrels. Note: Absolute mean error is the average of the absolute values of errors over 12 months; absolute mean percent error is the average of the absolute values of percent errors over 12 months.

Figure 1. Range of Percent Errors of Interim Refinery Inputs and Production Data.



**Note:** Diamond = Median of percent errors; i.e., the average of the two middle values are arranged in order of magnitude.  
 Bar = Range of percent errors occurring during the year; i.e., the upper end point of the bar is the maximum percent error and its lower end point is the minimum percent error.

**Source:** Energy Information Administration.

### Refinery Inputs and Production

Except for residual fuel oil, there was some improvement in weekly inputs and production data during 1983 (see Figure 1). Weekly residual fuel oil production shows positive bias, due to problems in product classification. Residual fuel oil might be classified an unfin-

ished oil or as residual fuel oil depending on whether it is to be further processed or sold.

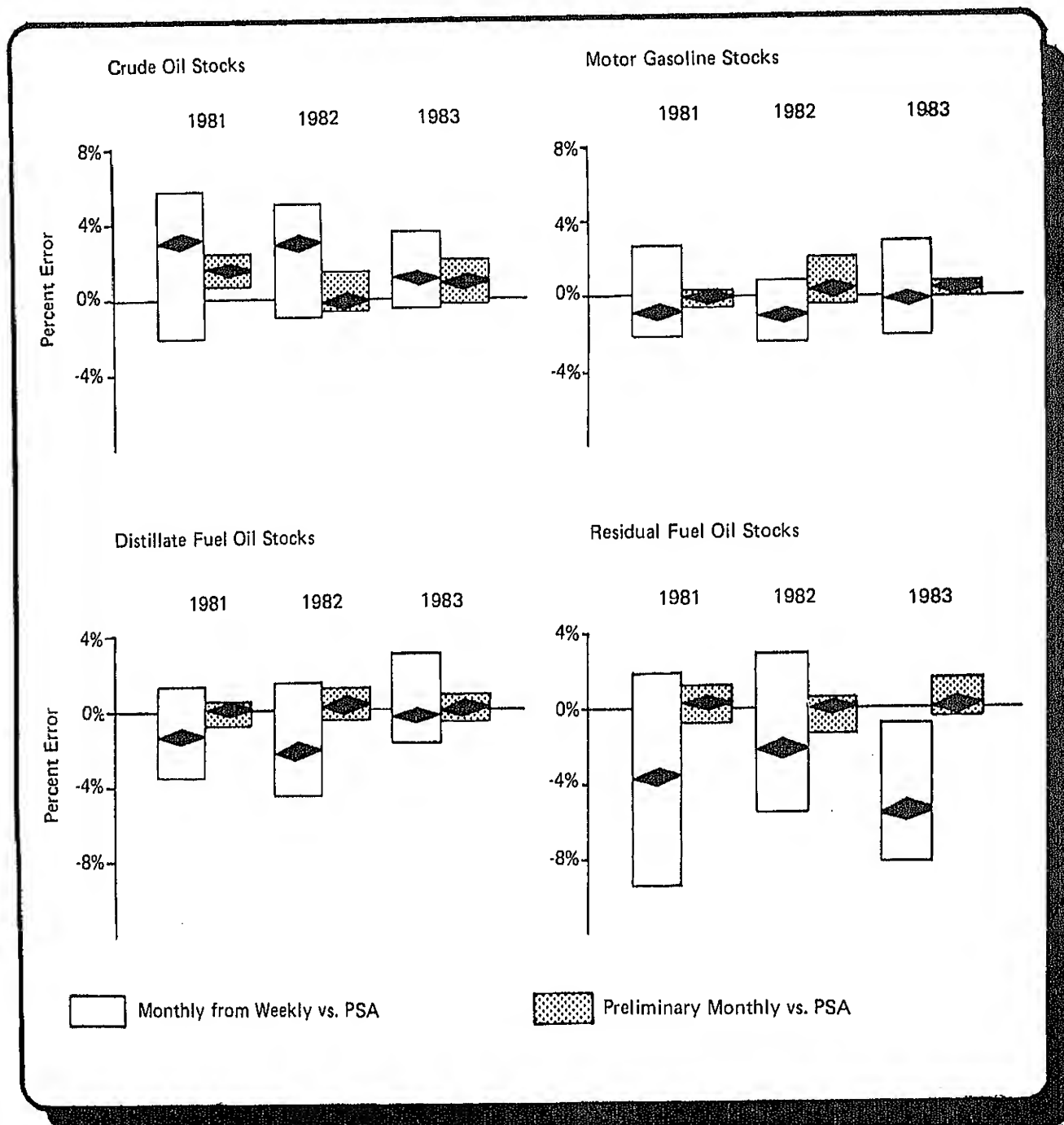
The accuracy of monthly refinery inputs and production data remained about the same in 1981, 1982, and 1983 except for residual fuel oil, which improved in 1983. Revisions were less than 1 percent except for one month (3.8 percent).

## Stocks

Accuracy of the weekly stocks data improved slightly in 1983 except for residual fuel oil (see Figure 2). Weekly residual fuel oil stocks data are still systematically low because of reporting errors of a few bulk terminals. Weekly crude oil stocks showed a slight positive bias.

While motor gasoline stocks data showed improvement, accuracy of most monthly stocks data series remained about the same. In general, revisions in monthly stocks data, although large volumetrically, were proportionally small during 1983.

Figure 2. Range of Percent Errors of Interim Stocks Data.

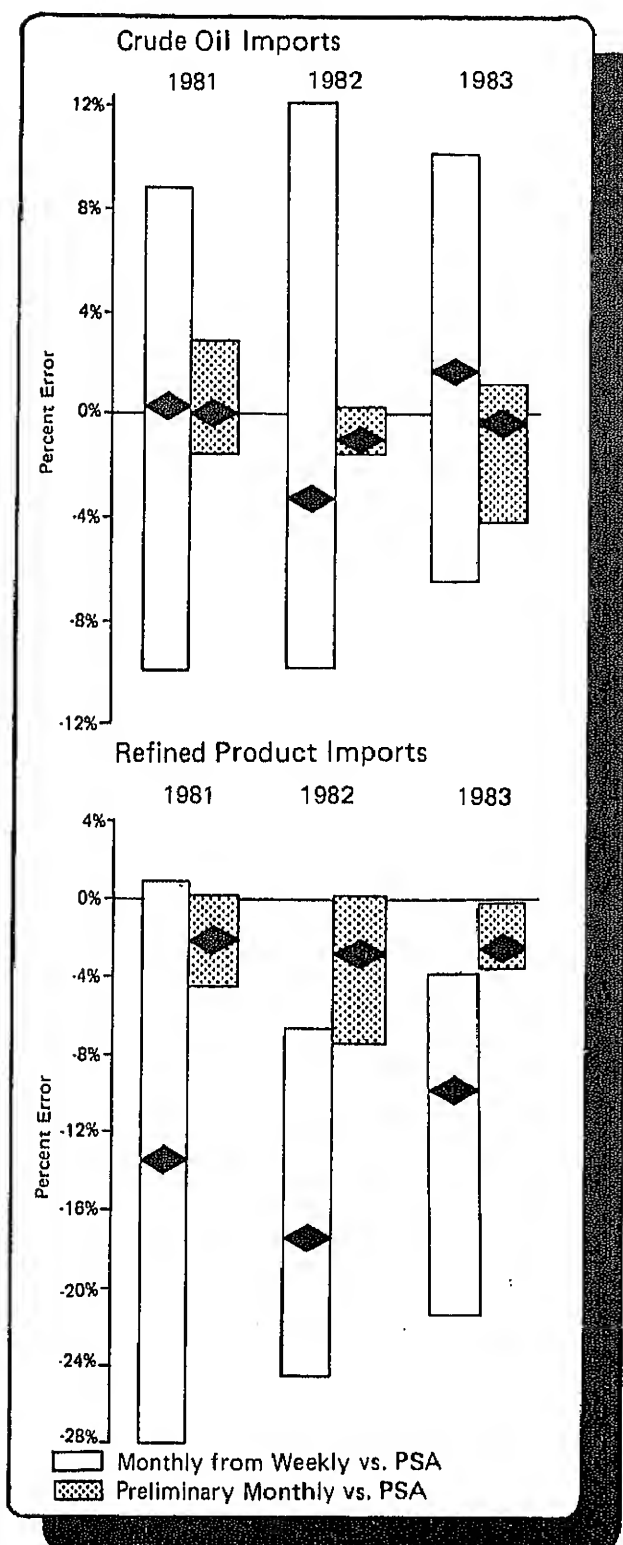


Note: Diamond = Median of percent errors; i.e., the average of the two middle values when the values are arranged in order of magnitude.

Bar = Range of percent errors occurring during the year; i.e., the upper point of the bar is the maximum percent error and its lower end point is the minimum percent error.

Source: Energy Information Administration

Figure 3. Range of Percent Errors of Interim Imports Data



Note: Diamond = Median of percent errors; i.e., the average of the two middle values when the values are arranged in order of magnitude.  
 Bar = Range of percent errors occurring during the year; i.e., the upper end point of the bar is the maximum percent error and its lower end point is the minimum percent error.

Source: Energy Information Administration.

## Imports

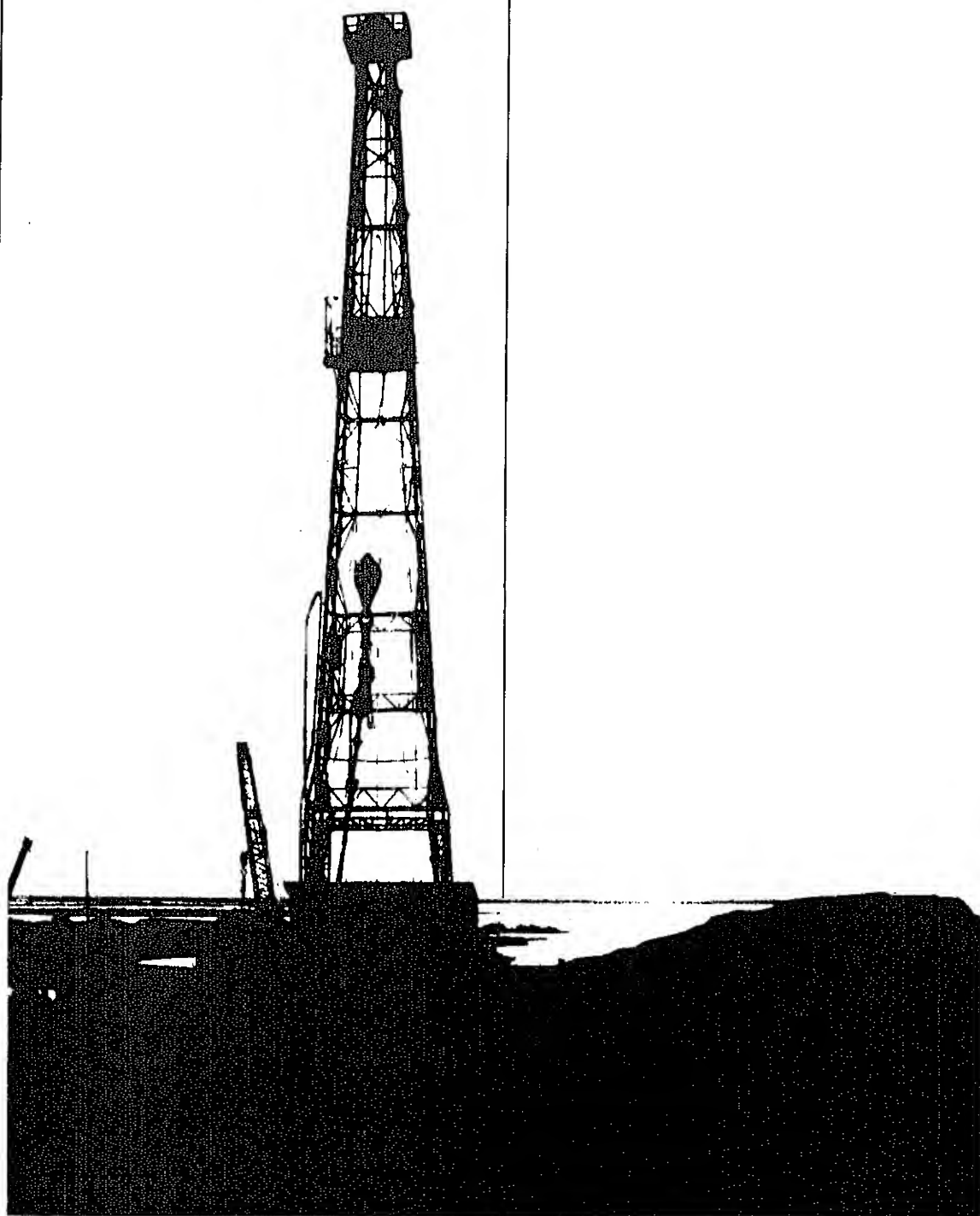
Figure 3 shows that the accuracy of weekly crude oil and refined product imports data improved slightly in 1983. Weekly imports data show relatively large errors. Imports data are highly variable and cannot be estimated from a sample with the same precision as the other petroleum variables. In addition, most imports data are estimated by respondents. Weekly estimates of refined product imports are almost always low, because small companies, which are not in the weekly sample, tend to exhibit irregular import patterns; i.e., they import large amounts of finished products only once or twice a year.

Accuracy of monthly refined product imports data improved in 1983. In general, imports data are subject to larger revision than the other petroleum variables, because final company import records are not available until forms have been verified by the U.S. Customs Service.

## Conclusion

Data quality efforts have enabled EIA to advance the timing of its weekly and monthly petroleum supply publications while maintaining the accuracy of most data series. Overall improvement in petroleum supply data has been a joint effort involving more timely and consistent reporting by respondents, and the development of systematic processing procedures, improved edit and estimation methods, and more thorough follow-up and reconciliation of aberrant data.







# Crude Oil<sup>1</sup> and Petroleum Products Overview

		Field Production			Stock Withdrawal <sup>2</sup>			Ending Stocks <sup>3</sup>
		Total Domestic <sup>4</sup>	Crude Oil	Natural Gas Plant Production	Crude Oil <sup>5</sup>	Petroleum Products	Petroleum Products Supplied	Crude Oil <sup>5</sup> and Petroleum Products
		Thousand Barrels per Day						Million Barrels
1973	AVERAGE	10,975	9,208	1,738	11	-146	17,308	1,008
1974	AVERAGE	10,498	8,774	1,688	-62	-117	16,653	<sup>6</sup> 1,074
1975	AVERAGE	10,045	8,375	1,633	<sup>8</sup> -17	<sup>8</sup> -145	16,322	1,133
1976	AVERAGE	9,774	8,132	1,603	-39	96	17,461	1,112
1977	AVERAGE	9,913	8,245	1,618	-170	-378	18,431	1,312
1978	AVERAGE	10,328	8,707	1,567	-78	172	18,847	1,278
1979	AVERAGE	10,179	8,552	1,584	-148	-25	18,513	1,341
1980	AVERAGE	10,214	8,597	1,573	-98	-42	17,056	<sup>6</sup> 1,392
1981	AVERAGE	10,230	8,572	1,609	<sup>8</sup> -290	<sup>8</sup> 130	16,058	1,484
1982	January	10,128	8,509	1,578	-401	1,298	16,124	1,456
	February	10,312	8,702	1,563	-242	1,230	16,001	1,428
	March	10,284	8,667	1,572	121	1,047	15,560	1,392
	April	10,188	8,591	1,542	-37	1,583	16,046	1,346
	May	10,244	8,683	1,518	29	-66	14,847	1,347
	June	10,212	8,646	1,511	40	-489	14,998	1,360
	July	10,229	8,658	1,513	-147	-926	14,821	1,393
	August	10,215	8,634	1,524	-440	-44	14,839	1,408
	September	10,279	8,701	1,518	263	-447	15,022	1,414
	October	10,299	8,701	1,530	-548	-47	14,859	1,432
	November	10,359	8,697	1,609	-398	-361	15,009	1,455
	December	10,276	8,598	1,628	128	688	15,487	<sup>6</sup> 1,430
	AVERAGE	10,252	8,649	1,550	-136	283	15,296	
1983	January	10,331	8,697	1,580	<sup>8</sup> -499	<sup>8</sup> 772	14,722	1,452
	February	10,388	8,758	1,575	-320	1,113	14,792	1,430
	March	10,279	8,700	1,541	83	1,810	15,541	1,372
	April	10,322	8,776	1,506	-402	308	14,692	1,374
	May	10,190	8,631	1,493	-15	-602	14,505	1,394
	June	10,261	8,667	1,523	-122	-276	15,289	1,405
	July	10,228	8,636	1,539	233	-909	15,019	1,426
	August	10,284	8,679	1,562	-796	-271	15,480	1,460
	September	10,447	8,784	1,602	-239	-621	15,506	1,485
	October	10,434	8,771	1,604	-274	-442	14,962	1,508
	November	10,461	8,770	1,641	114	-182	15,500	1,510
	December	9,983	8,397	1,544	-329	2,133	16,726	1,454
	AVERAGE	10,299	8,688	1,559	-214	234	15,231	
1984	January	10,282	8,659	1,585	-342	1,085	16,726	1,430
	February	10,410	8,726	1,629	186	-1,353	15,389	1,464
	March	10,354	8,718	1,588	-2	643	16,017	1,444
	April	10,347	8,688	1,616	-565	-128	15,484	1,465
	May	10,415	8,752	1,610	-616	-422	15,566	1,497
	June*	10,398	8,743	1,612	R -95	R -77	R 15,687	1,502
	July**	NA	8,769	NA	-240	-103	15,311	1,512
	AVERAGE	NA	8,722	NA	-242	-38	15,745	

<sup>1</sup> Includes lease condensate.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Stocks are totals as of end of period.

<sup>4</sup> Includes crude oil, natural gas plant production, other hydrocarbons, and alcohol.

<sup>5</sup> Includes stocks located in the Strategic Petroleum Reserve.

<sup>6</sup> Includes crude oil for storage in the Strategic Petroleum Reserve.

<sup>7</sup> Net Imports equal Imports minus Exports.

<sup>8</sup> In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Explanatory Note 10.

Footnotes continued on following page.

# Crude Oil<sup>1</sup> and Petroleum Products Overview (continued)

		Imports			Exports				
		Total	Crude Oil <sup>6</sup>	Petroleum Products	Total	Crude Oil	Petroleum Products		Net <sup>7</sup> Imports
Thousand Barrels per Day									
1973	AVERAGE	6,256	3,244	3,012	231	2	229	6,025	
1974	AVERAGE	6,112	3,477	2,635	221	3	218	5,892	
1975	AVERAGE	6,056	4,105	1,951	209	6	204	5,846	
1976	AVERAGE	7,313	5,287	2,026	223	8	215	7,090	
1977	AVERAGE	8,807	6,615	2,193	243	50	193	8,565	
1978	AVERAGE	8,363	6,356	2,008	362	158	204	8,002	
1979	AVERAGE	8,456	6,519	1,937	472	235	237	7,984	
1980	AVERAGE	6,909	5,263	1,646	544	287	258	6,365	
1981	AVERAGE	5,996	4,396	1,599	595	228	367	5,401	
1982	January	5,332	3,693	1,639	829	238	591	4,503	
	February	4,807	2,990	1,817	804	304	499	4,003	
	March	4,484	2,874	1,610	882	321	561	3,602	
	April	4,378	2,849	1,529	786	174	611	3,593	
	May	4,811	3,309	1,503	803	262	542	4,008	
	June	5,327	3,836	1,491	703	94	609	4,624	
	July	5,890	4,248	1,642	741	229	512	5,149	
	August	5,244	3,851	1,392	858	304	554	4,386	
	September	5,414	3,636	1,778	791	184	606	4,624	
	October	5,306	3,670	1,636	932	270	662	4,374	
	November	5,744	3,862	1,882	786	262	524	4,958	
	December	4,606	3,000	1,605	860	193	667	3,746	
	AVERAGE	5,113	3,488	1,625	815	236	579	4,298	
1983	January	4,438	2,964	1,474	973	117	856	3,464	
	February	3,726	2,267	1,459	865	262	603	2,861	
	March	3,690	2,290	1,400	801	174	627	2,889	
	April	4,727	3,118	1,609	809	88	721	3,918	
	May	5,089	3,360	1,729	848	280	568	4,241	
	June	5,326	3,577	1,749	774	144	630	4,552	
	July	5,741	3,871	1,870	571	145	426	5,170	
	August	6,159	4,227	1,933	663	172	491	5,496	
	September	6,129	4,210	1,919	684	177	507	5,445	
	October	5,258	3,446	1,812	576	140	436	4,682	
	November	5,210	3,337	1,873	679	186	494	4,531	
	December	5,033	3,213	1,820	639	95	544	4,394	
	AVERAGE	5,051	3,329	1,722	739	164	575	4,312	
1984	January	5,347	3,029	2,318	575	153	422	4,772	
	February	5,643	2,952	2,691	582	185	397	5,061	
	March	5,253	3,455	1,798	840	236	605	4,413	
	April	5,319	3,417	1,902	655	172	483	4,664	
	May	5,916	3,927	1,989	766	219	548	5,150	
	June*	R 5,304	R 3,410	R 1,893	864	222	642	4,440	
	July**	5,038	3,616	1,423	NA	NA	NA	NA	
	AVERAGE	5,401	3,405	1,997	NA	NA	NA	NA	

Footnotes continued.

\* See Explanatory Note 9.1.

\*\* Italics denote estimates based upon preliminary data. See Explanatory Note 8.

R = Revised data. NA = Not available.

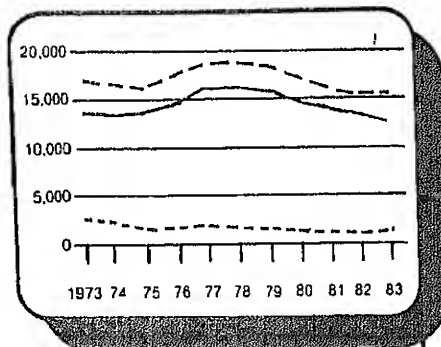
Note: Geographic coverage is the 50 United States and the District of Columbia.

Total may not equal sum of components due to independent rounding.

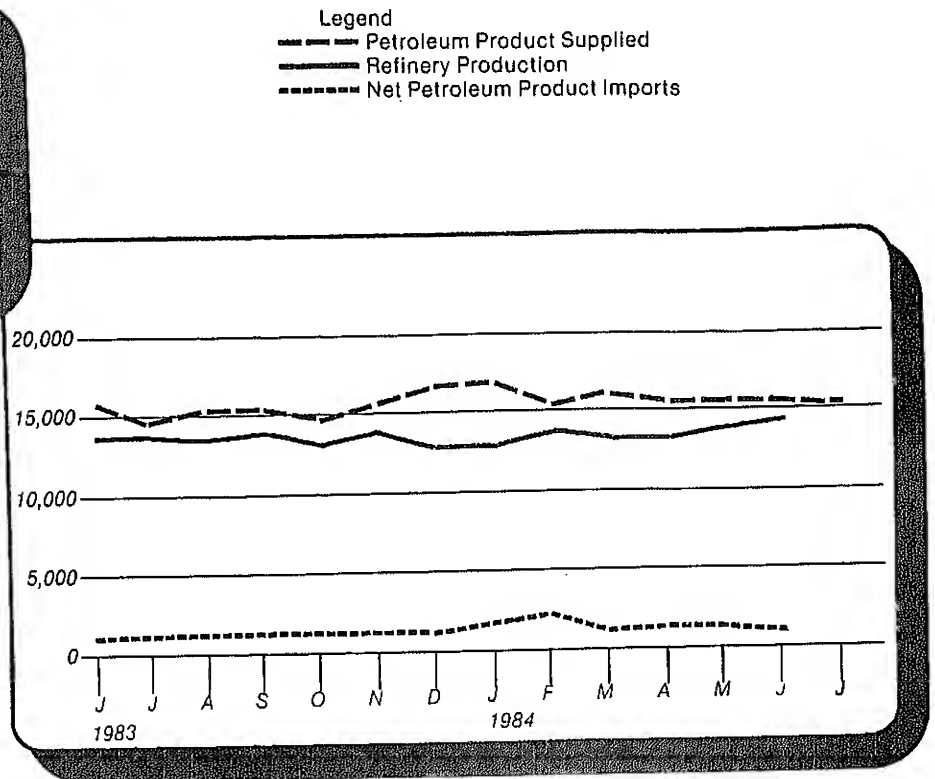
Source: See the last page of this section.

## Petroleum Overview

(Thousand Barrels Per Day)



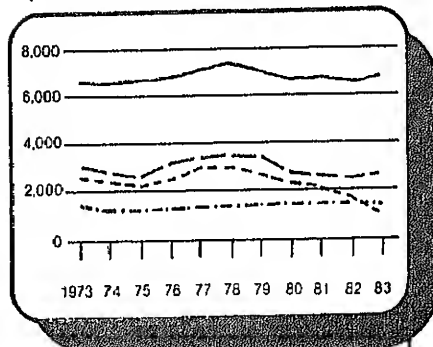
Annual



Monthly

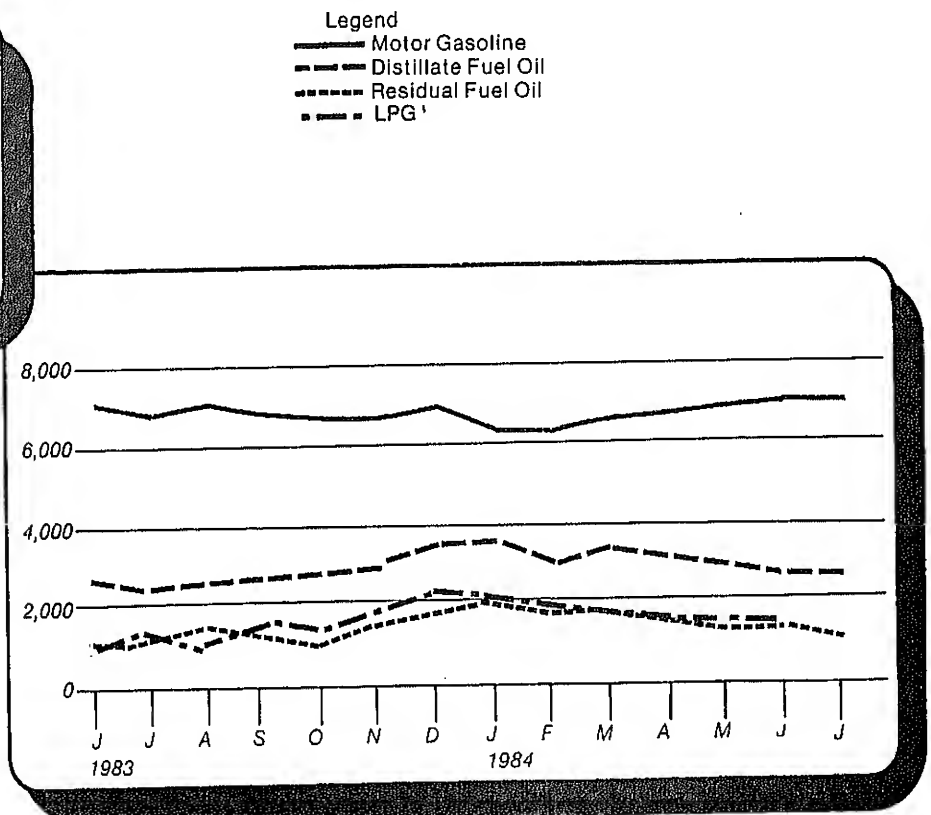
## Petroleum Products Supplied

(Thousand Barrels Per Day)



Annual

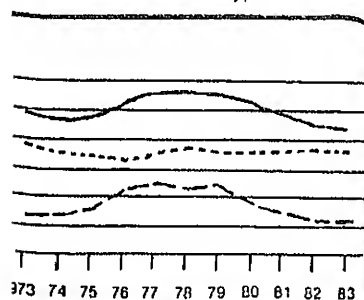
<sup>1</sup> Liquefied Petroleum Gases



Monthly

## Crude Oil Supply and Disposition

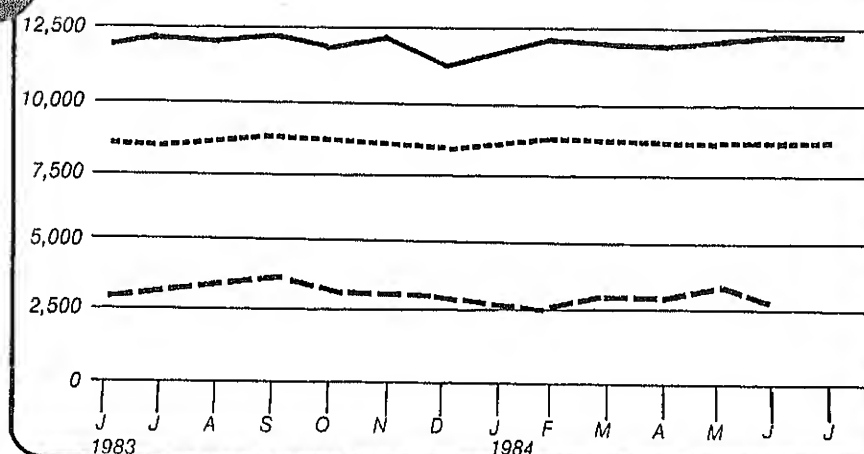
(Thousands of Barrels Per Day)



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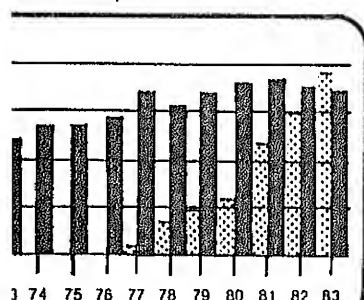
udes SPR Imports

Legend  
 — Refinery Inputs  
 - - Domestic Crude Oil Production  
 . . Net Imports<sup>1</sup>



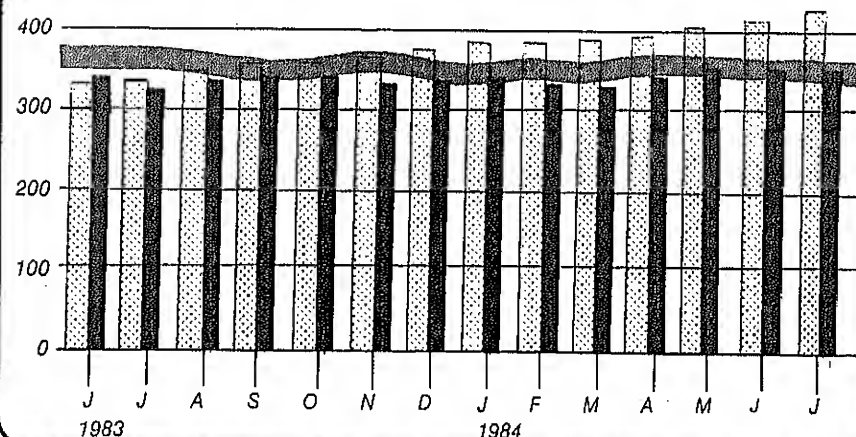
## Crude Oil Ending Stocks

(Thousands of Barrels)



and width of Average Stock  
 for other primary crude oil is  
 on 3 years of data. Jan. 81-Dec.  
 Explanatory Note 6.

Legend  
 ■ Other Primary  
 ■ SPR  
 ■ Average Stock Range<sup>1</sup>



Monthly 5

# Crude Oil<sup>1</sup> Supply and Disposition

		Supply							
		Field Production		Imports			Stock Withdrawal <sup>3</sup>		Unac- counted for Crude Oil
		Total Domestic	Alaskan	Total	SPR <sup>4</sup>	Other	SPR <sup>4</sup>	Other	
1973	AVERAGE	9,208	198	3,244		3,244		11	3
1974	AVERAGE	8,774	193	3,477		3,477		-62	-25
1975	AVERAGE	8,375	191	4,105		4,105		-17	17
1976	AVERAGE	8,132	173	5,287		5,287		-39	77
1977	AVERAGE	8,245	464	6,615	21	6,594	-20	-150	-6
1978	AVERAGE	8,707	1,229	6,356	162	6,195	-163	84	-57
1979	AVERAGE	8,552	1,401	6,519	67	6,452	-67	-81	-11
1980	AVERAGE	8,597	1,617	5,263	44	5,219	-45	-52	34
1981	AVERAGE	8,572	1,609	4,396	256	4,141	-336	<sup>6</sup> 46	83
1982	January	8,509	1,705	3,693	170	3,523	-159	-242	101
	February	8,702	1,707	2,990	159	2,830	-213	-29	156
	March	8,667	1,696	2,874	185	2,689	-235	357	2
	April	8,591	1,691	2,849	190	2,659	-233	196	231
	May	8,683	1,707	3,309	204	3,105	-176	205	111
	June	8,646	1,665	3,836	105	3,732	-105	144	133
	July	8,658	1,710	4,248	97	4,150	-97	-50	-20
	August	8,634	1,697	3,851	208	3,643	-208	-232	189
	September	8,701	1,705	3,636	139	3,497	-143	406	-210
	October	8,701	1,706	3,670	216	3,454	-216	-332	249
	November	8,697	1,676	3,862	180	3,683	-179	-219	-124
	December	8,598	1,682	3,000	124	2,877	-125	252	35
	AVERAGE	8,649	1,696	3,488	165	3,323	-174	38	71
1983	January	8,697	1,732	2,964	219	2,746	-219	<sup>6</sup> -280	170
	February	8,758	1,717	2,267	197	2,070	-197	-123	262
	March	8,700	1,732	2,290	201	2,089	-184	267	31
	April	8,776	1,721	3,118	205	2,913	-197	-205	98
	May	8,631	1,662	3,360	289	3,071	-293	278	169
	June	8,667	1,687	3,577	190	3,387	-188	66	370
	July	8,636	1,715	3,871	274	3,597	-264	497	-167
	August	8,679	1,697	4,227	350	3,876	-358	-438	281
	September	8,784	1,738	4,210	309	3,901	-307	68	-30
	October	8,771	1,733	3,446	202	3,244	-201	-73	44
	November	8,770	1,720	3,337	171	3,166	-135	250	34
	December	8,397	1,711	3,213	193	3,020	-252	-78	117
	AVERAGE	8,688	1,714	3,329	234	3,096	-234	20	114
1984	January	8,659	1,741	3,029	200	2,829	-173	-169	451
	February	8,726	1,740	2,952	85	2,868	-96	282	487
	March	8,718	1,740	3,455	148	3,307	-147	145	66
	April	8,688	1,725	3,417	170	3,247	-170	-396	590
	May	8,752	1,793	3,927	246	3,681	-245	-371	463
	June*	8,743	1,792	R 3,410	R 309	R 3,101	R -309	R 214	490
	July**	8,769	1,769	3,616	308	3,308	-319	79	NA
	AVERAGE	8,722	1,757	3,405	210	3,195	-209	-33	NA

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Stocks are totals as of end of period.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> Strategic Petroleum Reserve.

<sup>5</sup> Beginning in January 1983, crude oil used directly as fuel is shown as product supplied.

<sup>6</sup> Stocks of Alaskan crude oil in transit were included beginning in January 1981. Stock withdrawals are calculated using new basis stock levels. See Explanatory Notes 10 and 11.

Footnotes continued on following page.

# Crude Oil<sup>1</sup> Supply and Disposition (continued)

		Supply	Disposition				Ending Stocks <sup>2</sup>		
		Crude Used Directly <sup>5</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>5</sup>	Total Crude Oil	SPR <sup>4</sup>	Other Primary
		Thousand Barrels per Day					Million Barrels		
1973	AVERAGE	-19	13	12,431	2	NA	242		242
1974	AVERAGE	-15	13	12,133	3	NA	265		265
1975	AVERAGE	-17	13	12,442	6	NA	271		271
1976	AVERAGE	-18	15	13,416	8	NA	285		285
1977	AVERAGE	-14	16	14,602	50	NA	348	7	340
1978	AVERAGE	-14	16	14,739	158	NA	376	67	309
1979	AVERAGE	-13	16	14,648	235	NA	430	91	339
1980	AVERAGE	-13	15	13,481	287	NA	<sup>6</sup> 466	108	<sup>6</sup> 358
1981	AVERAGE	-58	5	12,470	228	NA	594	230	363
1982	January	-63	3	11,599	238	NA	606	235	371
	February	-64	2	11,236	304	NA	613	241	372
	March	-63	5	11,276	321	NA	609	249	361
	April	-65	3	11,392	174	NA	610	256	355
	May	-62	3	11,806	262	NA	609	261	348
	June	-60	7	12,494	94	NA	608	264	344
	July	-60	3	12,446	229	NA	613	267	346
	August	-57	2	11,871	304	NA	626	274	353
	September	-56	4	12,146	184	NA	619	278	341
	October	-51	2	11,749	270	NA	636	285	351
	November	-51	1	11,724	262	NA	648	290	358
	December	-53	1	11,514	193	NA	<sup>6</sup> 644	294	<sup>6</sup> 350
	AVERAGE	-59	3	11,774	236	NA			
1983	January	NA	2	11,143	117	71	660	301	360
	February	NA	3	10,633	262	71	669	306	363
	March	NA	2	10,859	174	70	667	312	355
	April	NA	2	11,433	88	68	679	318	361
	May	NA	1	11,800	280	63	679	327	353
	June	NA	( <sup>S</sup> )	12,284	144	64	683	332	351
	July	NA	2	12,360	145	65	676	341	335
	August	NA	1	12,152	172	64	700	352	349
	September	NA	1	12,482	177	66	708	361	347
	October	NA	1	11,782	140	63	716	367	349
	November	NA	2	12,004	186	64	713	371	341
	December	NA	1	11,234	95	67	723	379	344
	AVERAGE	NA	2	11,685	164	66			
1984	January	NA	1	11,579	153	64	733	384	348
	February	NA	1	12,100	185	65	727	387	340
	March	NA	2	11,936	236	62	728	392	336
	April	NA	( <sup>S</sup> )	11,893	172	64	744	397	348
	May	NA	2	12,243	219	62	764	404	359
	June*	NA	2	R 12,263	222	61	R 766	R 414	R 353
	July**	NA	NA	12,210	NA	NA	776	423	353
	AVERAGE	NA	NA	12,031	NA	NA			

Footnotes continued.

(<sup>S</sup>) = Less than 500 barrels per day.

\* See Explanatory Note 9.2.

\*\* Italics denote estimates based upon preliminary data. See Explanatory Note 8.

R = Revised data. NA = Not available.

Note: Geographic coverage is the 50 United States and the District of Columbia.

Total may not equal sum of components due to independent rounding.

Source: See the last page of this section.

# Crude Oil and Petroleum Product Imports

		Imports from OPEC Sources <sup>1</sup>										
		Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC <sup>2</sup>	Total OPEC	Total Arab OPEC <sup>3</sup>
		Thousand Barrels per Day										
1973	AVERAGE	136	164	486	71	213	223	459	1,135	106	2,993	915
1974	AVERAGE	190	4	461	74	300	469	713	979	88	3,280	752
1975	AVERAGE	282	232	715	117	390	280	762	702	122	3,601	1,383
1976	AVERAGE	432	453	1,230	254	539	298	1,025	700	134	5,066	2,424
1977	AVERAGE	559	723	1,380	335	541	535	1,143	690	287	6,193	3,185
1978	AVERAGE	649	654	1,144	385	573	555	919	645	226	5,751	2,963
1979	AVERAGE	636	658	1,356	281	420	304	1,080	690	212	5,637	3,056
1980	AVERAGE	488	554	1,261	172	348	9	857	481	130	4,300	2,551
1981	AVERAGE	311	319	1,129	81	366	0	620	406	90	3,323	1,848
1982	January	254	161	877	111	289	0	663	376	128	2,859	1,403
	February	139	92	693	89	244	0	584	355	102	2,297	1,054
	March	91	37	555	155	200	0	522	399	91	2,051	860
	April	85	0	511	122	215	0	427	426	85	1,871	740
	May	179	0	601	116	236	0	222	422	54	1,830	897
	June	115	0	593	94	215	72	537	361	110	2,098	820
	July	159	0	660	108	327	69	910	356	95	2,685	965
	August	181	0	489	133	271	27	574	299	133	2,107	818
	September	179	0	432	57	191	21	477	518	69	1,943	677
	October	249	7	494	61	242	108	313	504	106	2,084	810
	November	247	14	489	47	283	34	479	528	115	2,235	797
	December	155	0	237	12	265	88	462	399	73	1,690	421
	AVERAGE	170	26	552	92	248	35	514	412	97	2,146	854
1983	January	207	0	282	47	255	43	186	337	54	1,412	537
	February	115	0	214	9	217	0	92	393	28	1,068	338
	March	63	0	103	0	138	0	121	440	201	1,066	183
	April	227	0	162	( <sup>a</sup> )	210	0	186	523	125	1,432	389
	May	286	0	122	12	405	37	385	455	69	1,771	420
	June	300	0	188	40	466	38	467	335	138	1,973	528
	July	283	0	182	64	464	112	525	434	187	2,251	606
	August	378	0	448	52	433	213	464	511	230	2,728	903
	September	423	0	587	21	501	86	324	432	221	2,595	1,084
	October	261	0	638	16	368	12	307	337	169	2,108	938
	November	184	0	545	56	302	21	215	452	135	1,910	807
	December	144	0	569	45	294	9	329	415	163	1,969	826
	AVERAGE	240	0	337	30	338	48	302	422	144	1,862	632
1984	January	242	0	463	114	278	0	243	547	51	1,939	828
	February	348	0	324	33	267	0	244	481	174	1,871	723
	March	283	0	307	112	284	67	260	354	127	1,792	717
	April	280	0	320	95	221	0	288	581	158	1,944	734
	May	456	0	329	240	480	0	289	621	242	2,657	1,131
	June	284	0	411	46	415	0	243	574	139	2,112	806
	AVERAGE	316	0	359	108	325	11	261	526	148	2,055	825

<sup>1</sup> Excludes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products which were refined from crude oil produced in OPEC countries.

<sup>2</sup> Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

<sup>3</sup> Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar. Footnotes continued on following page.

# Crude Oil and Petroleum Product Imports ( continued )

		Imports from Non-OPEC Sources <sup>4</sup>										
		Baha- mas	Canada	Mexico	Nether- lands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico	Virgin Islands	Other Non OPEC	Total Non OPEC	Total Imports
		Thousand Barrels per Day										
1973	AVERAGE	174	1,325	16	585	255	15	99	329	465	3,263	6,256
1974	AVERAGE	164	1,070	8	511	251	8	90	391	340	2,832	6,112
1975	AVERAGE	152	846	71	332	242	14	90	406	300	2,454	6,056
1976	AVERAGE	118	599	87	275	274	31	88	422	353	2,247	7,313
1977	AVERAGE	171	517	179	211	289	126	105	466	550	2,614	8,807
1978	AVERAGE	160	467	318	229	253	180	94	429	484	2,613	8,363
1979	AVERAGE	147	538	439	231	190	202	92	431	548	2,819	8,456
1980	AVERAGE	78	455	533	225	176	176	88	388	491	2,609	6,909
1981	AVERAGE	74	447	522	197	133	375	62	327	534	2,672	5,996
1982	January	58	513	425	179	106	346	62	334	452	2,474	5,332
	February	67	537	476	221	120	181	38	362	508	2,510	4,807
	March	43	437	503	189	118	294	62	307	480	2,433	4,484
	April	82	360	476	184	166	247	36	266	690	2,507	4,378
	May	77	419	766	152	95	516	47	302	607	2,981	4,811
	June	32	481	797	148	129	557	58	322	708	3,231	5,327
	July	64	536	783	158	118	433	38	376	698	3,204	5,890
	August	80	443	853	145	106	520	24	317	650	3,137	5,244
	September	92	493	897	195	89	631	51	278	746	3,472	5,414
	October	45	459	682	148	109	666	52	262	801	3,222	5,306
	November	51	553	860	212	90	623	81	334	706	3,508	5,744
	December	88	561	689	174	102	438	48	336	480	2,916	4,606
	AVERAGE	65	482	685	175	112	456	50	316	627	2,968	5,113
1983	January	68	534	849	228	73	314	40	299	621	3,026	4,438
	February	92	586	722	183	81	193	50	192	558	2,658	3,726
	March	86	488	775	187	78	240	43	162	565	2,624	3,690
	April	174	454	981	216	85	421	20	183	759	3,295	4,727
	May	135	518	944	153	108	484	42	235	699	3,318	5,089
	June	137	586	830	173	120	440	48	262	757	3,353	5,326
	July	69	634	849	198	107	369	37	364	864	3,490	5,741
	August	144	542	906	197	90	461	40	313	738	3,431	6,159
	September	148	533	849	261	82	475	33	307	845	3,534	6,129
	October	171	532	771	172	106	414	48	357	580	3,151	5,258
	November	148	556	726	144	110	334	55	427	801	3,300	5,210
	December	127	604	710	153	113	429	22	278	628	3,063	5,033
	AVERAGE	125	547	826	189	96	382	40	282	701	3,189	5,051
1984	January	152	624	705	277	54	382	53	390	772	3,408	5,347
	February	142	620	747	288	77	338	58	418	1,083	3,772	5,643
	March	88	726	707	169	93	400	34	247	996	3,460	5,253
	April	88	691	859	207	91	282	37	257	863	3,375	5,319
	May	31	715	675	192	57	418	38	336	796	3,259	5,916
	June	50	499	732	234	104	318	53	268	934	3,192	5,304
	AVERAGE	92	647	737	227	79	357	45	319	905	3,408	5,463

Footnotes continued.

<sup>4</sup> Includes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products which were refined from crude oil produced in OPEC countries.

(\*) = Less than 500 barrels per day.

Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included. Total may not equal sum of components due to independent rounding.

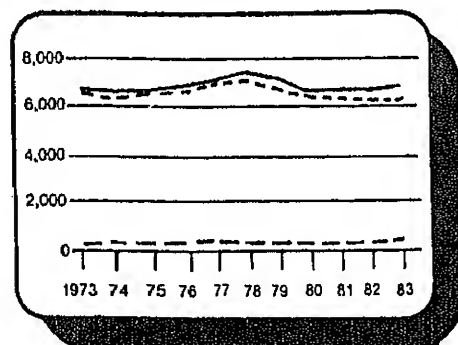
Geographic coverage: The 50 United States and the District of Columbia.

Source: See the last page of this section.

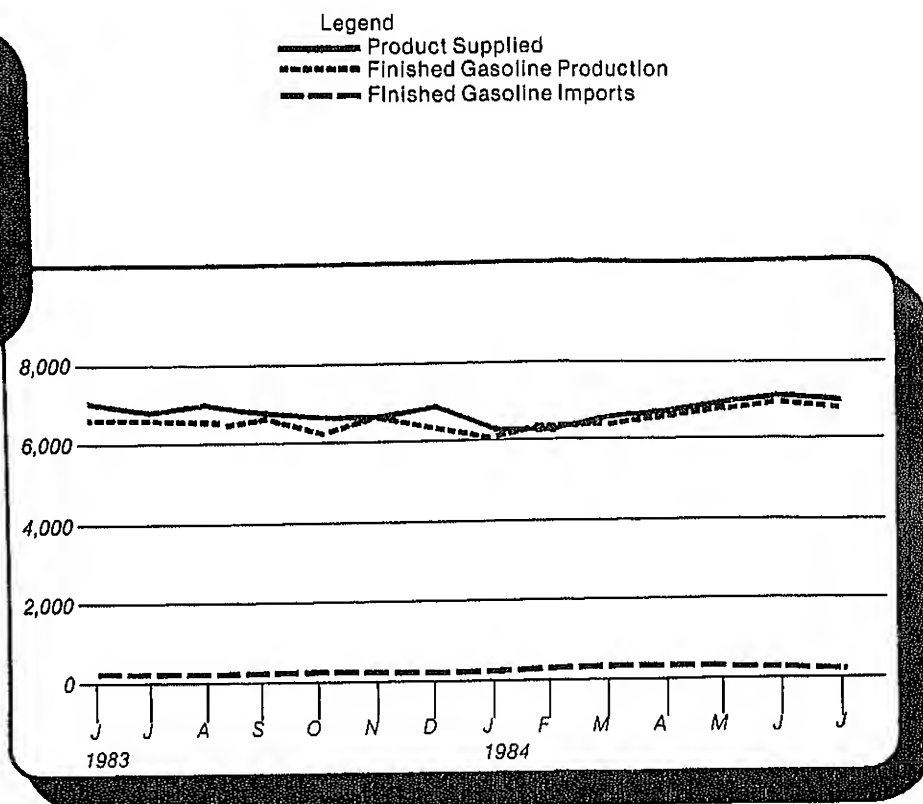


## Motor Gasoline Supply and Disposition

(Thousand Barrels Per Day)



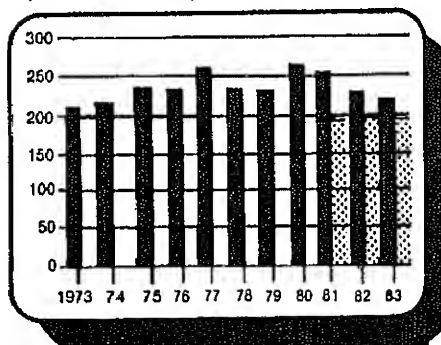
Annual



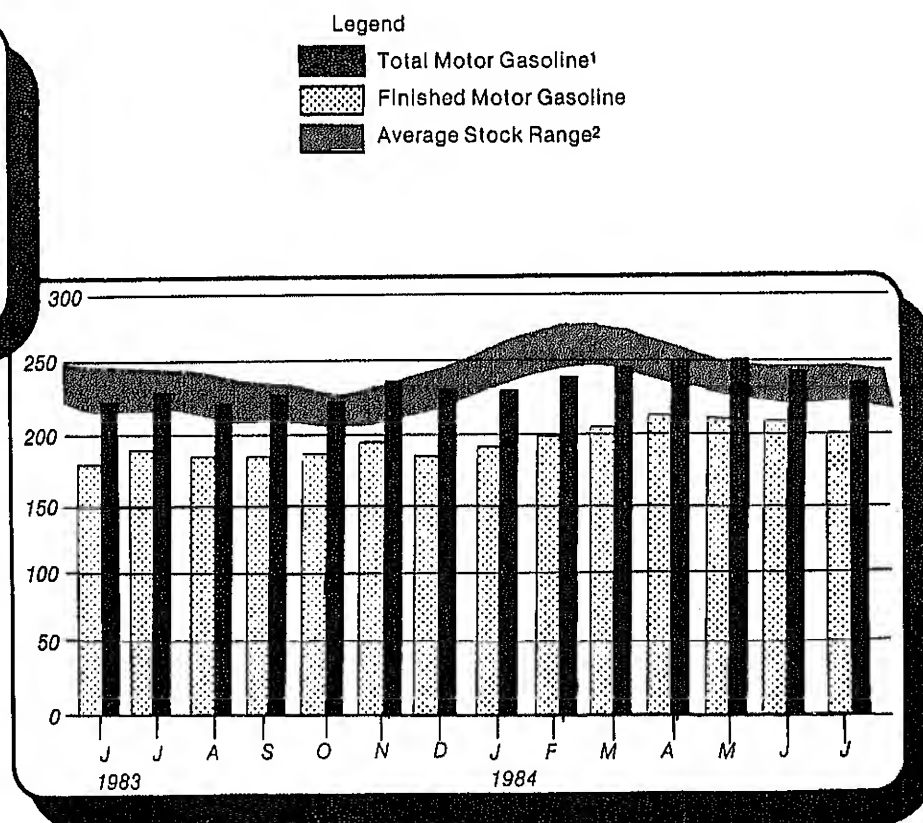
Monthly

## Motor Gasoline Ending Stocks

(Million Barrels)



Annual



Monthly

<sup>1</sup> Includes motor gasoline blending components and finished motor gasoline.

<sup>2</sup> Level and width of Average Stock Range for total motor gasoline based on 3 years of data, Jan. 81-Dec. 83. See Explanatory Note 6.

# Finished Motor Gasoline Supply and Disposition

		Supply			Disposition				Ending Stocks <sup>1</sup>	
		Total Produc- tion	Imports <sup>2</sup>	Stock With- drawal <sup>2 3</sup>	Exports	Products Supplied			Total Motor Gasoline <sup>5</sup>	Finished Motor Gasoline
						Total	Unleaded <sup>4</sup>	Unleaded		
Thousand Barrels per Day								Percent of Total	Million Barrels	
1973	AVERAGE	6,535	134	9	4	6,674	NA	NA	209	
1974	AVERAGE	6,360	204	-24	2	6,537	NA	NA	<sup>6</sup> 218	
1975	AVERAGE	6,520	184	<sup>6</sup> -28	2	6,675	NA	NA	235	
1976	AVERAGE	6,841	131	10	3	6,978	NA	NA	231	
1977	AVERAGE	7,033	217	-72	2	7,177	1,976	27.5	258	
1978	AVERAGE	7,169	190	54	1	7,412	2,521	34.0	238	
1979	AVERAGE	6,852	181	2	( <sup>s</sup> )	7,034	2,798	39.8	237	
1980	AVERAGE	6,506	140	-66	1	6,579	3,067	46.6	<sup>6</sup> 261	
1981	AVERAGE <sup>7</sup>	6,405	157	<sup>6</sup> 28	2	6,588	3,264	49.5	253	
1982	January	6,167	128	-316	18	5,961	3,067	51.5	261	213
	February	5,899	133	172	8	6,196	3,210	51.8	257	208
	March	5,994	183	334	44	6,466	3,358	51.9	247	198
	April	6,095	185	650	33	6,897	3,495	50.7	221	179
	May	6,319	182	177	23	6,655	3,415	51.3	214	173
	June	6,754	230	-134	14	6,835	3,565	52.2	219	177
	July	6,768	225	-178	24	6,790	3,577	52.7	226	183
	August	6,419	291	-81	16	6,614	3,526	53.3	227	185
	September	6,527	223	-198	22	6,531	3,404	52.1	234	191
	October	6,262	185	-42	15	6,391	3,351	52.4	234	192
	November	6,273	211	101	11	6,574	3,451	52.5	230	189
	December	6,542	178	-165	7	6,549	3,485	53.2	<sup>6</sup> 235	<sup>6</sup> 194
	AVERAGE	6,338	197	25	20	6,539	3,409	52.1		
1983	January	6,065	153	<sup>6</sup> -167	( <sup>s</sup> )	6,051	3,364	55.6	250	207
	February	5,848	128	24	( <sup>s</sup> )	6,000	3,264	54.4	250	207
	March	5,906	186	768	23	6,836	3,622	53.0	223	183
	April	6,201	255	-3	1	6,452	3,492	54.1	221	183
	May	6,397	305	-83	1	6,617	3,558	53.8	223	185
	June	6,655	277	84	22	6,994	3,792	54.2	223	183
	July	6,707	302	-225	18	6,765	3,746	55.4	231	190
	August	6,537	250	161	13	6,936	3,836	55.3	226	185
	September	6,611	279	-149	14	6,727	3,691	54.9	229	189
	October	6,188	330	72	2	6,588	3,711	56.3	227	187
	November	6,634	269	-298	2	6,603	3,692	55.9	236	196
	December	6,308	224	339	25	6,846	3,966	57.9	222	186
	AVERAGE	6,340	247	45	10	6,622	3,647	55.1		
1984	January	6,037	233	-1	1	6,268	3,606	57.5	225	186
	February	6,320	303	-384	2	6,237	3,585	57.5	237	197
	March	6,375	343	-197	9	6,512	3,747	57.5	243	203
	April	6,528	308	-153	( <sup>s</sup> )	6,682	3,854	57.7	248	207
	May	6,650	329	-106	( <sup>s</sup> )	6,873	3,990	58.1	253	211
	June*	R 6,620	R 272	R 217	17	R 7,092	4,210	59.4	R 245	R 204
	July**	6,537	231	319	NA	7,087	NA	NA	236	198
	AVERAGE	6,438	288	-41	NA	6,681	NA	NA		

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> Beginning in 1981, excludes blending components.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> Includes gasoline.

<sup>5</sup> Includes motor gasoline blending components.

<sup>6</sup> In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Explanatory Note 10.

<sup>7</sup> Beginning in January 1981, survey forms were modified. See Explanatory Note 12.

\* See Explanatory Note 9.3.

\*\* Italics denote estimates based upon preliminary data. See Explanatory Note 8.

R = Revised data. NA = Not available. (s) = Less than 500 barrels per day.

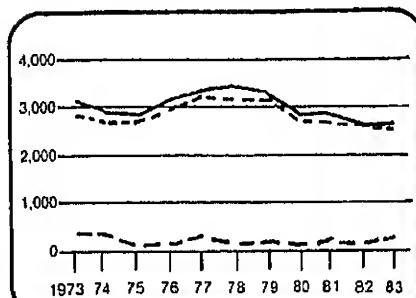
Note: Geographic coverage is the 50 United States and the District of Columbia.

Total may not equal sum of components due to independent rounding.

Source: See the last page of this section.

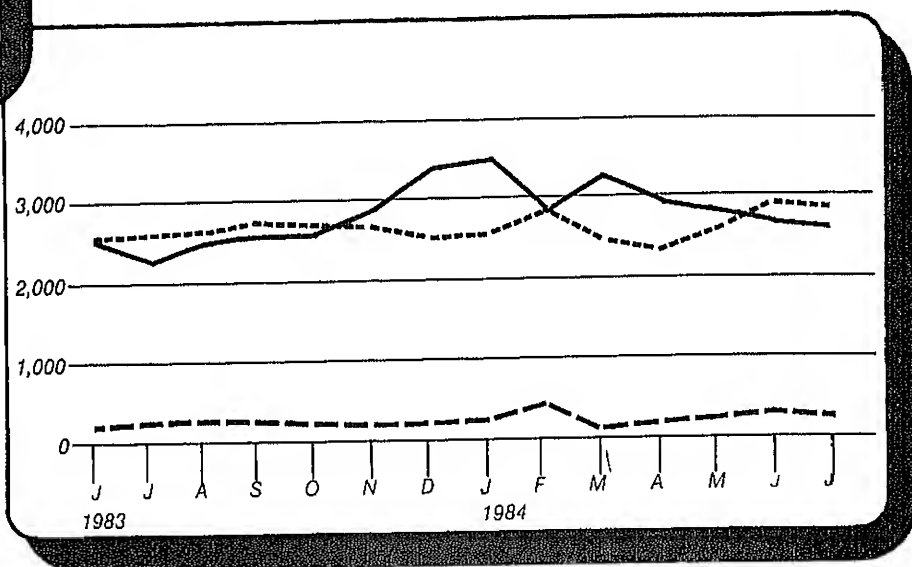
## Distillate Fuel Oil Supply and Disposition

(Thousand Barrels Per Day)



Annual

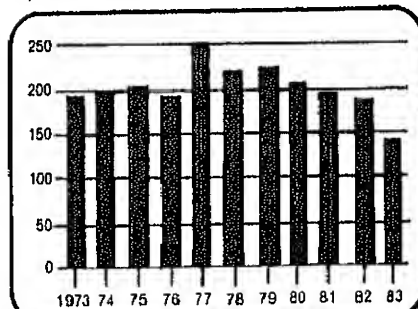
Legend  
 — Product Supplied  
 - - - Total Production  
 . . . Imports



Monthly

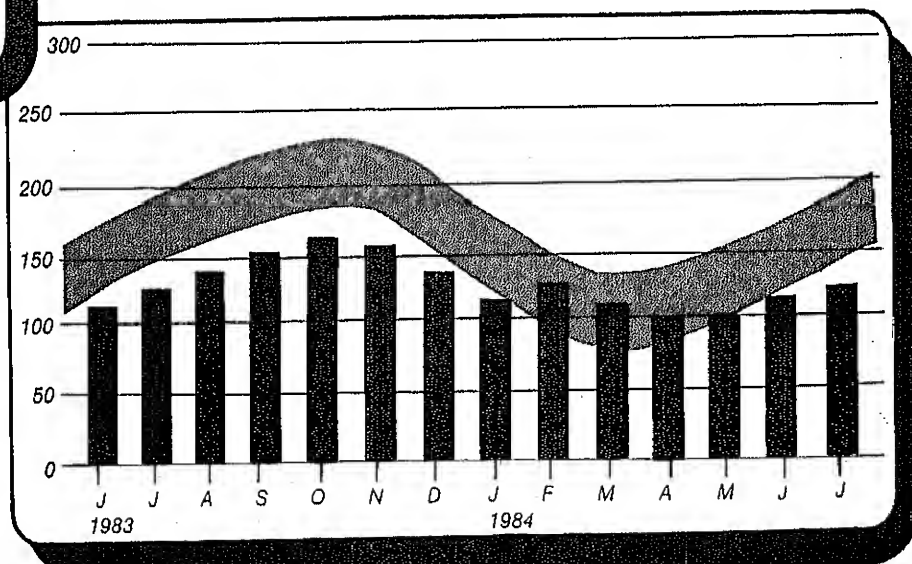
## Distillate Fuel Oil Ending Stocks

(Million Barrels)



Annual

Legend  
 ■ Average Stock Range <sup>1</sup>



Monthly

<sup>1</sup> Level and width of Average Stock Range for distillate fuel oil is based on 3 years of data. Jan. 81-Dec. 83. See Explanatory Note 6.

# Distillate Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Products Supplied <sup>3</sup>	
		Thousand Barrels per Day						
								Million Barrels
1973	AVERAGE	2,822	392	-115	2	9	3,092	196
1974	AVERAGE	2,669	289	-9	2	2	2,948	<sup>4</sup> 200
1975	AVERAGE	2,654	155	<sup>4</sup> 40	2	1	2,851	209
1976	AVERAGE	2,924	146	62	1	1	3,133	186
1977	AVERAGE	3,278	250	-176	1	1	3,352	250
1978	AVERAGE	3,167	173	93	1	3	3,432	216
1979	AVERAGE	3,153	193	-34	1	3	3,311	229
1980	AVERAGE	2,662	142	64	1	3	2,866	<sup>4</sup> 205
1981	AVERAGE <sup>5</sup>	2,613	173	<sup>4</sup> 38	10	5	2,829	192
1982	January	2,591	97	876	10	90	3,484	164
	February	2,427	132	605	11	90	3,085	147
	March	2,288	48	682	10	84	2,945	126
	April	2,358	59	612	13	64	2,978	108
	May	2,618	74	-183	10	75	2,444	114
	June	2,729	102	-335	10	55	2,452	124
	July	2,734	125	-789	11	24	2,058	148
	August	2,507	80	-339	10	40	2,218	159
	September	2,657	61	-85	12	139	2,507	161
	October	2,838	91	-289	8	66	2,581	170
	November	2,860	145	-514	8	24	2,475	186
	December	2,655	109	225	10	143	2,855	<sup>4</sup> 179
	AVERAGE	2,606	93	35	10	74	2,671	
1983	January	2,321	68	<sup>4</sup> 580	NA	173	2,797	168
	February	2,135	59	691	NA	105	2,780	148
	March	1,993	42	971	NA	59	2,947	118
	April	2,171	73	500	NA	47	2,697	103
	May	2,444	147	-186	NA	50	2,354	109
	June	2,546	179	-161	NA	40	2,524	114
	July	2,604	267	-546	NA	55	2,270	131
	August	2,615	301	-379	NA	43	2,495	142
	September	2,739	259	-386	NA	37	2,575	154
	October	2,681	260	-276	NA	55	2,611	163
	November	2,680	203	45	NA	54	2,874	161
	December	2,522	221	676	NA	54	3,365	140
	AVERAGE	2,456	174	124	NA	64	2,690	
1984	January	2,585	270	676	NA	40	3,490	119
	February	2,864	458	-439	NA	41	2,842	132
	March	2,480	115	727	NA	66	3,256	110
	April	2,347	220	393	NA	32	2,929	98
	May	2,633	252	-10	NA	48	2,827	98
	June*	R 2,879	R 266	R -490	NA	53	R 2,602	R 113
	July**	2,797	190	-368	NA	NA	2,577	125
	AVERAGE	2,653	251	76	NA	NA	2,934	

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Beginning in January 1983, product supplied for distillate fuel oil does not include crude oil used directly. See Explanatory Note 4.

<sup>4</sup> In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Explanatory Note 10.

<sup>5</sup> Beginning in January 1981, survey forms were modified. See Explanatory Note 12.

\* See Explanatory Note 9.4.

\*\* Italics denote estimates based upon preliminary data. See Explanatory Note 8.

R = Revised data. NA = Not available. (s) = Less than 500 barrels per day.

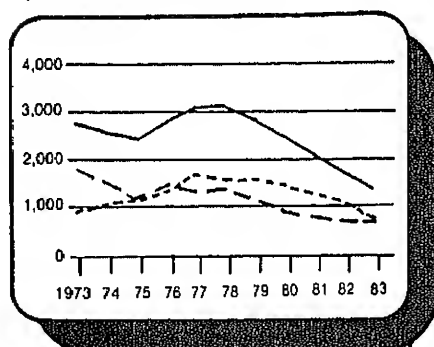
Note: Geographic coverage is the 50 United States and the District of Columbia.

Total may not equal sum of components due to independent rounding.

Source: See the last page of this section.

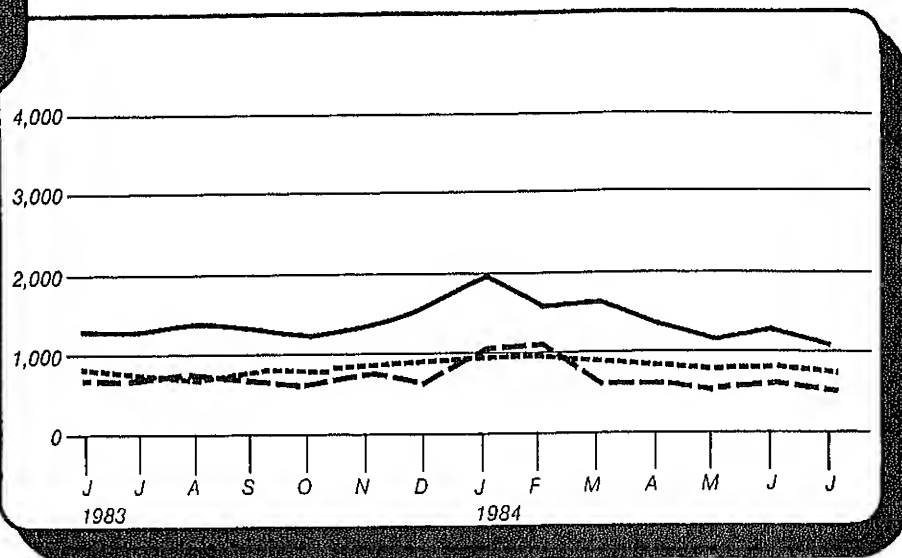
## Residual Fuel Oil Supply and Disposition

(Thousand Barrels Per Day)



Annual

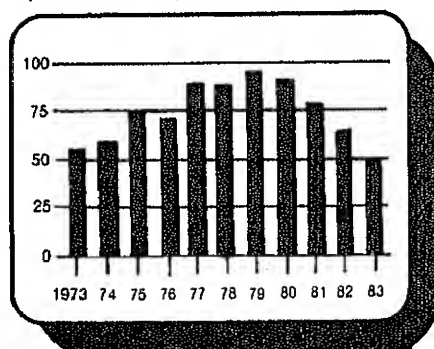
Legend  
 — Product Supplied  
 - - - Total Production  
 . . . Imports



Monthly

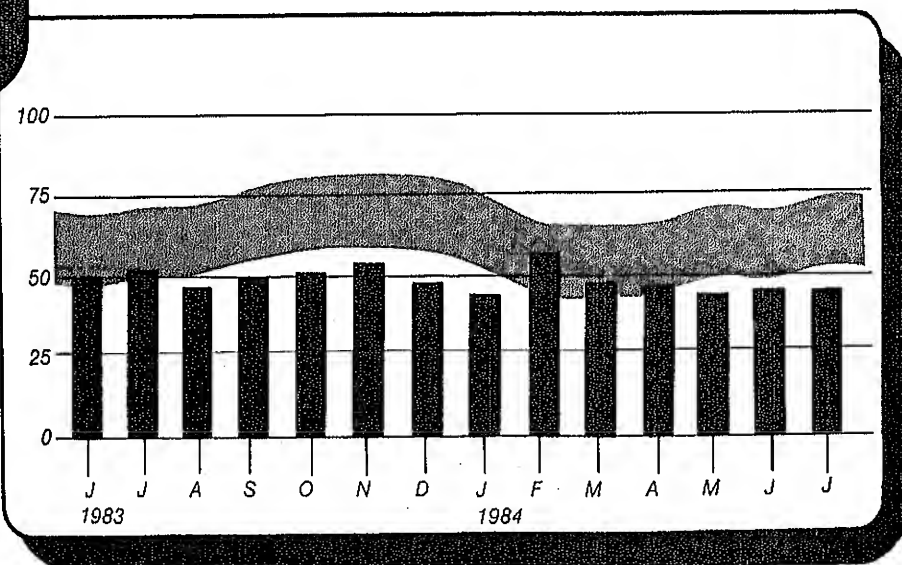
## Residual Fuel Oil Ending Stocks

(Million Barrels)



Annual

Legend  
 [Shaded Area] Average Stock Range <sup>1</sup>



Monthly

<sup>1</sup> Level and width of Average Stock Range for residual fuel oil based on 3 years of data, Jan. 81-Dec. 83. See Explanatory Note 6.

# Residual Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Products Supplied <sup>3</sup>	
Thousand Barrels per Day								Million Barrels
1973	AVERAGE	971	1,853	5	17	23	2,822	53
1974	AVERAGE	1,070	1,587	-17	13	14	2,639	<sup>4</sup> 60
1975	AVERAGE	1,235	1,223	<sup>4</sup> 2	15	15	2,462	74
1976	AVERAGE	1,377	1,413	5	17	12	2,801	72
1977	AVERAGE	1,754	1,359	-48	13	6	3,071	90
1978	AVERAGE	1,667	1,355	-1	13	13	3,023	90
1979	AVERAGE	1,687	1,151	-15	12	9	2,826	96
1980	AVERAGE	1,580	939	10	12	33	2,508	<sup>4</sup> 92
1981	AVERAGE <sup>5</sup>	1,321	800	<sup>4</sup> 37	48	118	2,088	78
1982	January	1,235	831	301	53	235	2,165	69
	February	1,186	956	363	53	213	2,344	58
	March	1,123	912	12	53	197	1,903	58
	April	1,166	788	150	52	234	1,923	54
	May	1,128	742	-172	52	191	1,560	59
	June	1,074	652	-57	50	217	1,501	61
	July	1,028	657	56	49	239	1,550	59
	August	965	551	203	47	235	1,531	53
	September	1,008	872	-306	44	148	1,470	62
	October	955	783	-57	43	234	1,490	64
	November	989	837	-94	43	182	1,591	66
	December	989	747	6	43	186	1,598	<sup>4</sup> 66
	AVERAGE	1,070	776	32	48	209	1,716	
1983	January	972	691	<sup>4</sup> 258	NA	294	1,626	61
	February	857	647	257	NA	191	1,570	53
	March	835	686	227	NA	169	1,579	46
	April	941	753	-10	NA	310	1,374	47
	May	936	738	-141	NA	190	1,342	51
	June	828	677	36	NA	218	1,323	50
	July	769	684	-64	NA	90	1,299	52
	August	710	739	115	NA	165	1,400	48
	September	826	706	-47	NA	134	1,351	50
	October	807	638	-50	NA	153	1,243	51
	November	845	780	-97	NA	167	1,362	54
	December	897	649	182	NA	141	1,587	49
	AVERAGE	852	699	55	NA	185	1,421	
1984	January	953	1,061	119	NA	151	1,981	45
	February	1,003	1,107	-420	NA	87	1,602	58
	March	887	633	321	NA	204	1,637	48
	April	840	637	9	NA	130	1,357	47
	May	829	554	35	NA	200	1,218	46
	June*	R 841	R 676	R -17	NA	176	R 1,324	R 47
	July**	749	551	-84	NA	NA	1,043	47
	AVERAGE	871	743	-1	NA	NA	1,451	

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Beginning in January 1983, product supplied for residual fuel oil does not include crude oil used directly. See Explanatory Note 4.

<sup>4</sup> In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Explanatory Note 10.

<sup>5</sup> Beginning in January 1981, survey forms were modified. See Explanatory Note 12.

\* See Explanatory Note 9.4.

\*\* Italics denote estimates based upon preliminary data. See Explanatory Note 8.

R = Revised data. NA = Not available. (s) = Less than 500 barrels per day.

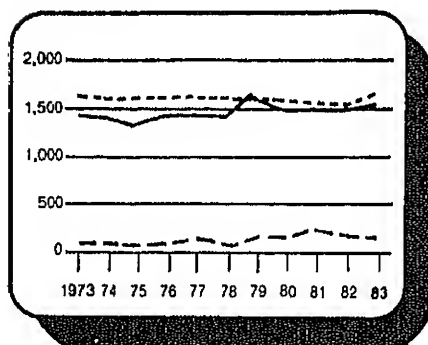
Note: Geographic coverage is the 50 United States and the District of Columbia.

Total may not equal sum of components due to independent rounding.

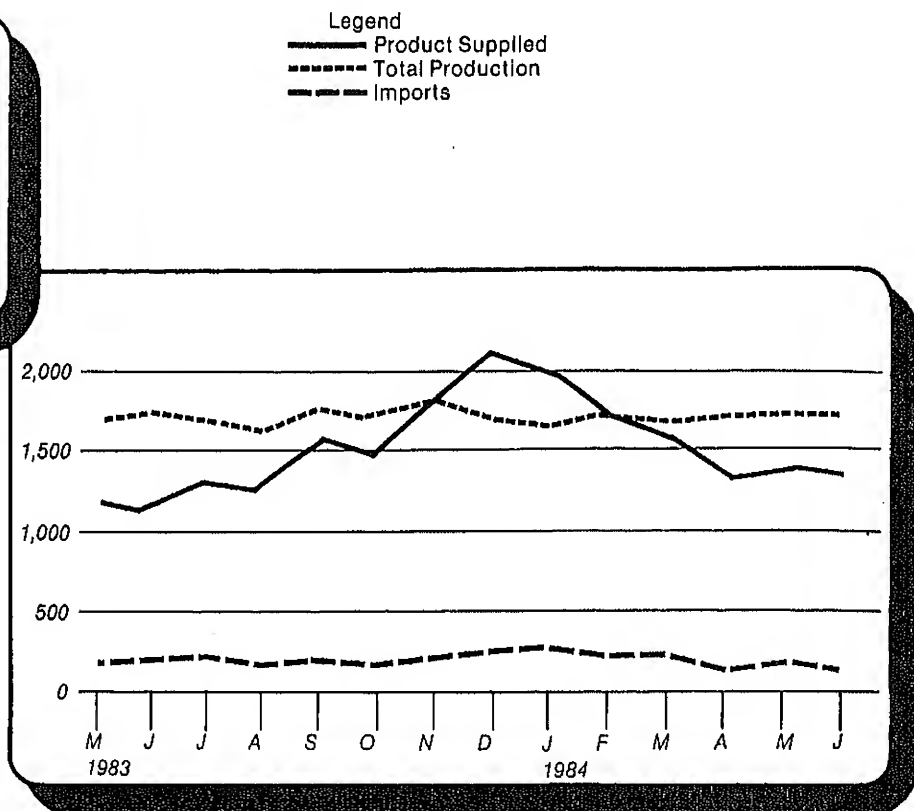
Source: See the last page of this section.

## Liquefied Petroleum Gases Supply and Disposition

(Thousand Barrels Per Day)



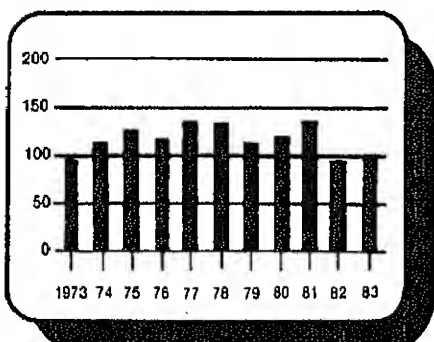
Annual



Monthly

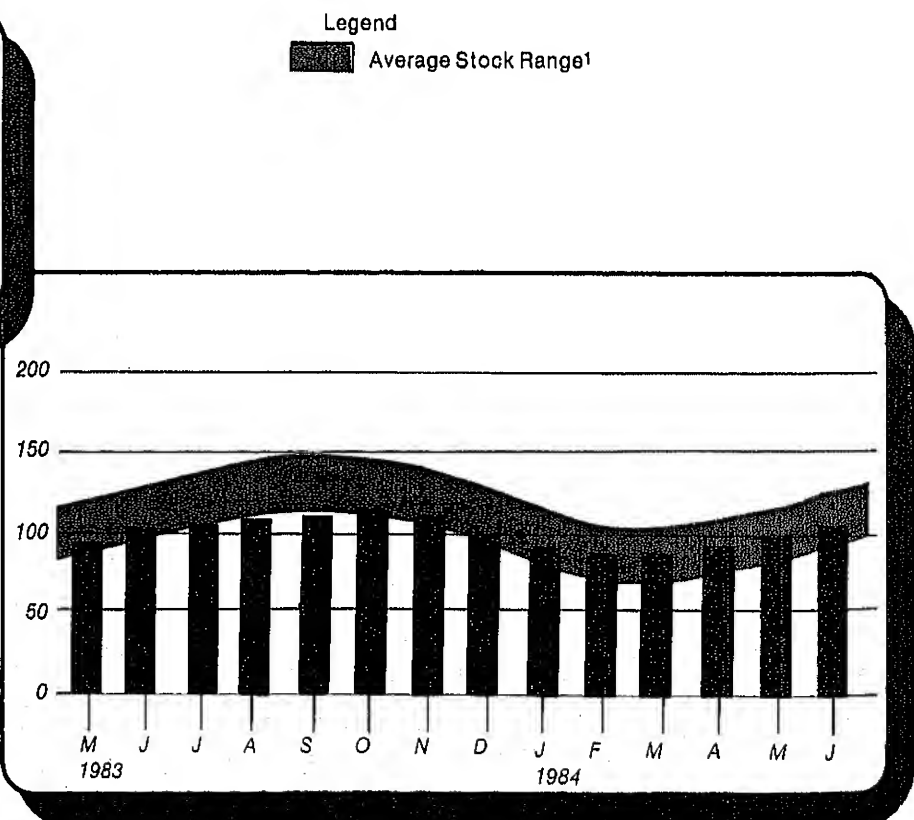
## Liquefied Petroleum Gases Ending Stocks

(Million Barrels)



Annual

<sup>1</sup> Level and width of Average Stock range for liquefied petroleum gases based on 3 years of data, Jan. 81-Dec. 83. See Explanatory Note 6.



Monthly

# Liquefied Petroleum Gases<sup>1</sup> Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>2</sup>
		Total Production	Imports	Stock Withdrawal <sup>3</sup>	Refinery Inputs	Exports	Products Supplied	
		Thousand Barrels per Day						Million Barrels
1973	AVERAGE	1,600	132	-35	220	27	1,449	99
1974	AVERAGE	1,565	123	-38	220	25	1,406	<sup>4</sup> 113
1975	AVERAGE	1,527	112	<sup>4</sup> -35	246	26	1,333	125
1976	AVERAGE	1,535	130	24	260	25	1,404	116
1977	AVERAGE	1,566	161	-55	233	18	1,422	136
1978	AVERAGE	1,537	123	12	239	20	1,413	132
1979	AVERAGE	1,556	217	70	236	15	1,592	111
1980	AVERAGE	1,535	216	-27	233	21	1,469	<sup>4</sup> 120
1981	AVERAGE	1,571	244	<sup>4</sup> -18	289	42	1,466	135
1982	January	1,565	314	443	391	67	1,863	121
	February	1,466	291	243	327	51	1,621	114
	March	1,544	223	211	289	74	1,615	108
	April	1,506	188	98	257	77	1,458	105
	May	1,565	186	-71	234	43	1,403	107
	June	1,515	192	-86	262	106	1,254	109
	July	1,476	227	-13	253	37	1,399	110
	August	1,511	125	-45	254	61	1,276	111
	September	1,538	247	37	274	85	1,463	110
	October	1,517	194	97	306	81	1,421	107
	November	1,542	267	175	363	37	1,583	102
	December	1,580	258	256	395	56	1,642	<sup>4</sup> 94
	AVERAGE	1,528	226	111	300	65	1,499	
1983	January	1,611	240	<sup>4</sup> 520	313	118	1,939	86
	February	1,600	305	128	244	76	1,713	82
	March	1,543	166	-9	197	127	1,377	82
	April	1,607	124	-156	198	116	1,260	87
	May	1,613	167	-225	207	84	1,263	94
	June	1,664	172	-334	203	59	1,241	104
	July	1,656	191	-221	217	55	1,354	111
	August	1,586	160	-199	229	29	1,289	117
	September	1,705	178	-30	236	86	1,531	118
	October	1,688	160	-81	268	32	1,467	120
	November	1,785	180	70	362	33	1,640	118
	December	1,645	247	575	363	66	2,038	<sup>4</sup> 101
	AVERAGE	1,642	190	4	253	73	1,509	
1984	January	1,610	269	<sup>4</sup> 470	333	23	1,993	93
	February	1,690	237	146	323	41	1,708	89
	March	1,685	241	12	289	68	1,581	89
	April	1,711	155	-170	253	54	1,389	94
	May	1,709	211	-221	244	42	1,412	101
	June*	1,714	158	-189	237	53	1,394	106
	AVERAGE	1,686	212	9	280	47	1,580	

<sup>1</sup> Includes ethane, propane, normal butane, and isobutane.

Beginning in January 1984, unfractonated stream is reported by individual product.

<sup>2</sup> Stocks are totals as of end of period.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> In January 1975, 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock withdrawal calculations. See Explanatory Note 10.

Note: Geographic coverage is the 50 United States and the District of Columbia.

Total may not equal sum of components due to independent rounding.

Source: See the last page of this section.



# Other Petroleum Products<sup>1</sup> Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>2</sup>
		Total Production	Imports	Stock Withdrawal <sup>3</sup>	Refinery Inputs	Exports	Products Supplied	
		Thousand Barrels per Day						Million Barrels
1973	AVERAGE	3,693	502	-9	750	166	3,270	208
1974	AVERAGE	3,558	432	-28	665	174	3,123	<sup>4</sup> 218
1975	AVERAGE	3,424	277	<sup>4</sup> -2	537	160	3,002	219
1976	AVERAGE	3,643	206	-5	524	175	3,145	220
1977	AVERAGE	3,912	205	-27	514	165	3,410	230
1978	AVERAGE	4,046	166	14	492	167	3,568	225
1979	AVERAGE	4,153	195	-37	352	209	3,749	238
1980	AVERAGE	3,956	210	-23	311	198	3,634	<sup>4</sup> 247
1981	AVERAGE	3,739	226	<sup>4</sup> 46	723	199	3,088	282
1982	January	3,171	269	-7	624	180	2,631	282
	February	3,403	305	-153	663	138	2,755	287
	March	3,466	243	-191	725	161	2,631	293
	April	3,408	309	73	796	204	2,790	290
	May	3,317	318	184	824	210	2,785	285
	June	3,547	315	123	812	216	2,954	281
	July	3,660	408	-1	856	187	3,023	281
	August	3,583	346	217	743	202	3,201	274
	September	3,533	375	105	749	213	3,051	271
	October	3,529	383	244	915	266	2,976	264
	November	3,498	423	-28	837	269	2,786	264
	December	3,324	313	366	885	275	2,842	<sup>4</sup> 253
	AVERAGE	3,453	334	80	787	211	2,869	
1983	January	3,194	322	<sup>4</sup> -419	588	271	2,239	271
	February	3,229	321	12	673	232	2,658	270
	March	3,381	319	-147	572	249	2,732	275
	April	3,299	404	-24	592	247	2,840	276
	May	3,405	374	35	705	242	2,866	275
	June	3,610	444	96	717	292	3,144	272
	July	3,636	425	148	735	209	3,265	267
	August	3,695	482	30	668	242	3,297	266
	September	3,792	497	-6	788	236	3,255	266
	October	3,578	424	-107	711	195	2,990	270
	November	3,568	441	95	912	238	2,957	267
	December	3,123	479	361	883	257	2,823	<sup>4</sup> 256
	AVERAGE	3,460	411	6	712	242	2,923	
1984	January	3,391	486	<sup>4</sup> -177	561	207	2,931	253
	February	3,582	586	-256	751	225	2,935	261
	March	3,510	466	-218	530	258	2,969	268
	April	3,584	582	-207	627	268	3,063	274
	May	3,683	642	-118	775	257	3,175	277
	June*	3,863	521	404	1,229	343	3,213	265
	AVERAGE	3,601	547	-97	743	259	3,048	

<sup>1</sup> Includes pentanes plus, other hydrocarbons and alcohol, unfinished oils, gasoline blending components and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, and liquefied petroleum gases.

<sup>2</sup> Stocks are totals as of end of period.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> In January 1975, 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock withdrawal calculations. See Explanatory Note 10.

\* See Explanatory Note 9.6.

Note: Geographic coverage is the 50 United States and the District of Columbia.

Total may not equal sum of components due to independent rounding.

Source: See the last page of this section.

## Sources

1. 1973 through 1976: U.S. Department of the Interior, Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual* and *PAD Districts Supply/Demand, Annual*.
2. 1977 through 1980: Energy Information Administration (EIA), *Energy Data Reports, Petroleum Statement, Annual* and *PAD Districts Supply/Demand, Annual*, and unleaded gasoline data from *Monthly Petroleum Statistics Report*.
3. January 1981 through December 1983: EIA, *Petroleum Supply Annual*.
4. January 1984 through June 1984: Detailed statistics in appropriate Issues of the *Petroleum Supply Monthly*. (See Explanatory Notes 9.1 through 9.6).
5. July 1984: Estimates based on EIA weekly data (except domestic crude oil production) (see Explanatory Note 1.1).
6. January 1984 through July 1984: Domestic crude oil production estimate based on historical statistics from State Conservation Agencies and the U.S. Geological Survey. (See Explanatory Note 3).



## Detailed Statistics





Table 1. U.S. Petroleum Balance, June 1984

	Current Month		Year-to-date	
	Thousand Barrels	Thousand Barrels per Day	Thousand Barrels	Thousand Barrels per Day
<b>Crude Oil (Including Lease Condensate)</b>				
<b>Field Production</b>				
(1) Alaska .....	E 53,769	1,792	E 319,458	1,755
(2) Lower 48 States .....	E 208,521	6,951	E 1,266,490	6,959
(3) Total U.S. ....	E 262,290	8,743	E 1,585,948	8,714
<b>Net Imports</b>				
(4) Imports (Gross Excluding SPR) .....	93,044	3,101	577,950	3,176
(5) SPR Imports .....	9,267	309	35,207	193
(6) Exports .....	6,665	222	35,993	198
(7) Imports (Net Including SPR) .....	95,646	3,188	577,165	3,171
<b>Other Sources</b>				
(8) SPR Withdrawal (+) or Addition (-) .....	-9,257	-309	-34,646	-190
(9) Other Stock Withdrawal (+) or Addition (-) .....	6,421	214	-9,516	-52
(10) Product Supplied and Losses .....	-1,909	-64	-11,730	-64
(11) Unaccounted for 1 .....	14,710	490	76,878	422
(12) Total Other Sources .....	9,965	332	20,986	115
(13) Crude Input to Refineries .....	367,901	12,263	2,184,099	12,001
(13) = (3) + (7) + (12)				
<b>Natural Gas Plant Liquids (NGPL)</b>				
(14) Field Production .....	48,374	1,612	292,381	1,606
(15) Net Imports 2 .....	863	29	7,044	39
(16) Stock Withdrawal (+) or Addition (-) 2 .....	-476	-16	-1,756	-10
(17) Total NGPL Supply .....	48,761	1,625	297,669	1,636
<b>Other Liquids</b>				
<b>Unfinished Oils and Gasoline Blending Components, Total</b>				
(18) Stock Withdrawal (+) or Addition (-) .....	12,204	407	-7,712	-42
(19) Imports .....	9,060	302	58,249	320
(20) Other Hydrocarbons and Alcohol New Supply (Field Production) .....	1,261	42	8,470	47
(21) Refinery Processing Gain 1 .....	16,010	534	100,405	552
(22) Crude Oil Product Supplied .....	1,842	61	11,468	63
(23) Total Other Liquids .....	40,377	1,346	170,880	939
(23) = (18) through (22)				
(24) Total Production of Products 3 .....	457,039	15,235	2,652,648	14,575
(24) = (13) + (17) + (23)				
<b>Net Imports of Refined Products 3</b>				
(25) Imports (Gross) .....	46,799	1,560	315,369	1,733
(26) Exports .....	19,180	639	93,594	514
(27) Imports (Net) .....	27,619	-921	221,775	1,219
(28) Total New Supply of Products .....	484,658	16,155	2,874,423	15,794
(28) = (24) + (27)				
(29) Refined Products Stock Withdrawal (+) or Addition (-) 3 .....	-14,052	-468	4,555	25
(30) Total Petroleum Products Supplied for Domestic Use .....	470,605	15,687	2,878,978	15,819
(30) = (28) + (29)				
(31) Finished Motor Gasoline .....	212,767	7,092	1,203,308	6,612
(32) Distillate Fuel Oil .....	78,069	2,602	545,117	2,995
(33) Residual Fuel Oil .....	39,712	1,324	276,778	1,521
(34) Liquefied Petroleum Gases .....	41,824	1,394	287,579	1,580
(35) Other 4 .....	96,391	3,213	554,728	3,048
(36) Crude Oil .....	1,842	61	11,468	63
(37) Total Product Supplied .....	470,605	15,687	2,878,978	15,819
(37) = (31) through (36)				
<b>Ending Stocks, All Oils</b>				
(38) Crude Oil and Lease Condensate (Excluding SPR) .....	352,692	--	352,692	--
(39) Strategic Petroleum Reserve (SPR) .....	413,735	--	413,735	--
(40) Unfinished Oils .....	110,781	--	110,781	--
(41) Gasoline Blending Components 5 .....	41,951	--	41,951	--
(42) Pentanes Plus .....	10,521	--	10,521	--
(43) Finished Refined Products 3 .....	572,495	--	572,495	--
(44) Total Stocks .....	1,502,175	--	1,502,175	--

1 A balancing item.

2 Includes products in the pentanes plus category only.

3 For products included see Explanatory Note 9.7.

4 Includes pentanes plus, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil and liquefied petroleum gases.

5 Includes other hydrocarbons and alcohol.

E = Estimated.

-- Not Applicable.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes 1, 2 and 9.7.

Table 2. Supply and Disposition of Crude Oil and Petroleum Products, June 1984  
(Thousand Barrels)

Commodity	Supply				Disposition					
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied	Ending Stocks
Crude Oil (including lease condensate)	E 262,290	0	102,311	-2,836	14,710	67	367,901	6,665	1,842	766,427
Natural Gas Liquids and LRGs										
Pentanes Plus	48,191	12,077	5,679	-6,137	0	0	13,309	1,657	44,844	116,729
Liquefied Petroleum Gases	8,834	0	941	-476	0	0	6,201	79	3,020	10,521
Ethane	39,357	12,077	4,738	-5,661	0	0	7,108	1,579	41,824	106,208
Propane	14,887	432	1,761	110	0	0	53	157	16,979	21,202
Normal Butane	15,457	8,604	1,410	-4,476	0	0	107	1,010	19,878	55,326
Isobutane	6,008	3,059	948	-523	0	0	3,450	333	5,709	19,703
	3,005	-18	619	-772	0	0	3,498	79	-742	9,977
Other Liquids										
Other Hydrocarbons and Alcohol	1,261	0	9,060	12,204	0	0	30,670	0	-8,145	152,732
Unfinished Oils	1,261	0	0	-62	0	0	1,199	0	0	330
Motor Gasoline Blending Components	0	0	6,875	11,440	0	0	26,344	0	-8,029	110,781
Aviation Gasoline Blending Components	0	0	2,185	767	0	0	3,068	0	-116	41,294
	0	0	0	59	0	0	59	0	0	327
Finished Petroleum Products										
Finished Motor Gasoline	183	415,813	42,061	-8,391	0	0	0	17,602	432,064	466,287
Finished Lead Motor Gasoline	75	198,523	8,165	6,519	0	0	0	514	212,767	204,173
Finished Unleaded Motor Gasoline	48	79,841	2,629	4,475	0	0	0	514	86,478	96,676
Finished Aviation Gasoline	27	118,682	5,536	2,044	0	0	0	0	126,289	107,497
Naphtha-Type Jet Fuel	0	999	234	-63	0	0	0	0	1,170	2,358
Kerosene-Type Jet Fuel	0	6,272	485	-328	0	0	0	81	6,348	6,906
Kerosene	0	27,340	843	-1,661	0	0	0	191	26,330	36,000
Distillate Fuel Oil	0	2,863	273	-275	0	0	0	6	2,856	7,887
Residual Fuel Oil	40	86,343	7,985	-14,710	0	0	0	1,589	78,069	112,868
Naphtha < 400 Deg. for Petro. Feed. Use	0	25,224	20,283	-520	0	0	0	5,275	39,712	46,811
Other Oils > 400 Deg. for Petro. Feed. Use	0	4,378	1,044	-203	0	0	0	211	5,008	1,942
Special Naphthas	0	8,356	0	212	0	0	0	841	7,727	1,962
Lubricants	0	1,694	1,606	-180	0	0	0	291	2,829	3,023
Waxes	0	4,895	374	-127	0	0	0	476	4,666	11,058
Petroleum Coke	0	471	41	-37	0	0	0	37	438	593
Asphalt and Road Oil	0	13,671	0	343	0	0	0	8,062	5,952	4,558
Still Gas	0	15,024	113	2,711	0	0	0	4	17,844	23,901
Miscellaneous Products	0	18,010	0	0	0	0	0	0	18,010	0
	68	1,750	616	-72	0	0	0	23	2,340	2,247
Total	311,925	427,890	159,111	-5,160	14,710	67	411,880	25,924	470,605	1,502,175

1 Unaccounted for crude oil is a balancing item.  
(5) = Less than 500 barrels

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) = Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 3. Year-to-Date Supply and Disposition of Crude Oil and Petroleum Products, January - June 1984  
(Thousand Barrels)

Commodity	Supply				Disposition					
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied	Ending Stocks
Crude Oil (including lease condensate)	E 1,585,948	0	613,157	-44,162	76,878	262	2,184,099	35,993	11,468	766,427
Natural Gas Liquids and LRGs	291,281	67,511	46,160	-207	0	0	86,409	9,016	309,320	116,729
Pentanes Plus	51,920	0	7,537	-1,756	0	0	35,466	493	21,742	10,521
Liquefied Petroleum Gases	239,361	67,511	38,623	1,549	0	0	50,943	8,523	287,579	106,208
Ethane	90,988	4,173	16,038	177	0	0	389	986	110,001	21,202
Propane	94,246	50,560	12,045	-46	0	0	727	4,876	151,202	55,326
Normal Butane	36,439	12,889	6,380	686	0	0	28,598	2,168	25,628	19,703
Isobutane	17,688	-111	4,161	732	0	0	21,229	493	749	9,977
Other Liquids	8,470	0	58,249	-7,712	0	0	99,836	0	-40,829	152,732
Other Hydrocarbons and Alcohol	8,470	0	0	-45	0	0	8,425	0	0	330
Unfinished Oils	0	0	45,052	-3,283	0	0	72,693	0	-30,924	110,781
Motor Gasoline Blending Components	0	0	13,197	-4,374	0	0	18,728	0	-9,905	41,294
Aviation Gasoline Blending Components	0	0	0	-10	0	0	-10	0	0	327
Finished Petroleum Products	1,100	2,403,238	276,746	3,006	0	0	0	85,072	2,599,018	466,287
Finished Motor Gasoline	493	1,168,156	54,228	-18,678	0	0	0	891	1,203,308	204,173
Finished Leaded Motor Gasoline	325	482,163	26,772	-2,592	0	0	0	891	505,778	96,676
Finished Unleaded Motor Gasoline	168	685,993	27,455	-16,086	0	0	0	0	697,530	107,497
Finished Aviation Gasoline	0	4,397	279	-67	0	0	0	0	4,609	2,358
Naphtha-Type Jet Fuel	0	36,406	3,536	-693	0	0	0	175	39,074	6,906
Kerosene-Type Jet Fuel	0	162,282	8,839	-3,632	0	0	0	769	166,719	36,000
Kerosene	6	20,071	1,458	-27	0	0	0	17	21,491	7,887
Distillate Fuel Oil	238	478,247	47,631	27,534	0	0	0	8,533	545,117	112,868
Residual Fuel Oil	0	162,219	141,175	2,297	0	0	0	28,913	276,778	46,811
Naphtha < 400 Deg. for Petro. Feed. Use	0	24,607	5,073	-230	0	0	0	1,292	28,165	1,942
Other Oils > 400 Deg. for Petro. Feed. Use	0	49,329	0	-205	0	0	0	3,022	46,102	1,962
Special Naphthas	-50	10,132	9,401	130	0	0	0	546	19,067	3,023
Lubricants	0	29,002	1,922	1,017	0	0	0	3,092	28,849	11,058
Waxes	0	2,622	260	184	0	0	0	230	2,835	593
Petroleum Coke	0	81,894	0	923	0	0	0	37,362	45,455	4,558
Asphalt and Road Oil	0	59,388	249	-5,109	0	0	0	50	54,478	23,901
Still Gas	0	102,909	0	0	0	0	0	0	102,909	0
Miscellaneous Products	413	11,577	2,689	-438	0	0	0	180	14,061	2,247
Total	1,886,799	2,470,749	994,312	-49,075	76,878	262	2,370,344	130,080	2,878,978	1,502,175

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(E) = Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.



Table 4. Daily Average Supply and Disposition of Crude Oil and Petroleum Products, June 1984  
(Thousand Barrels per Day)

Commodity	Supply					Disposition			
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil	Crude Losses	Refinery Inputs	Exports	Products Supplied
Crude Oil (including lease condensate)	E 8,743	0	3,410	-95	490	2	12,263	222	61
Natural Gas Liquids and LRGs	1,606	403	189	-205	0	0	444	55	1,495
Pentanes Plus	294	0	31	-16	0	0	207	3	101
Liquefied Petroleum Gases	1,312	403	158	-189	0	0	237	53	1,394
Ethane	496	14	59	4	0	0	2	5	566
Propane	515	287	47	-149	0	0	4	34	663
Normal Butane	200	102	32	-17	0	0	115	11	190
Isobutane	100	-1	21	-26	0	0	117	3	-25
Other Liquids	42	0	302	407	0	0	1,022	0	-272
Other Hydrocarbons and Alcohol	42	0	0	-2	0	0	40	0	0
Unfinished Oils	0	0	229	381	0	0	878	0	-268
Motor Gasoline Blending Components	0	0	73	26	0	0	102	0	-4
Aviation Gasoline Blending Components	0	0	0	2	0	0	2	0	0
Finished Petroleum Products	6	13,860	1,402	-280	0	0	0	587	14,402
Finished Motor Gasoline	3	6,617	272	217	0	0	0	17	7,092
Finished Leaded Motor Gasoline	2	2,661	88	149	0	0	0	17	2,883
Finished Unleaded Motor Gasoline	1	3,956	185	68	0	0	0	0	4,210
Finished Aviation Gasoline	0	33	8	-2	0	0	0	0	39
Naphtha-Type Jet Fuel	0	209	16	-11	0	0	0	3	212
Kerosene-Type Jet Fuel	0	911	28	-55	0	0	0	6	878
Kerosene	0	95	9	-9	0	0	0	(s)	95
Distillate Fuel Oil	1	2,878	266	-490	0	0	0	53	2,602
Residual Fuel Oil	0	841	676	-17	0	0	0	176	1,324
Naphtha < 400 Deg. for Petro. Feed. Use	0	146	35	-7	0	0	0	7	167
Other Oils > 400 Deg. for Petro. Feed. Use	0	279	0	7	0	0	0	28	258
Special Naphthas	0	56	54	-6	0	0	0	10	94
Lubricants	0	163	12	-4	0	0	0	16	156
Waxes	0	16	1	-1	0	0	0	1	15
Petroleum Coke	0	456	0	11	0	0	0	269	198
Asphalt and Road Oil	0	501	4	90	0	0	0	(s)	595
Still Gas	0	600	0	0	0	0	0	0	600
Miscellaneous Products	2	58	21	-2	0	0	0	1	78
Total	10,398	14,263	5,304	-172	490	2	13,729	864	15,687

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) = Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 5. Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January - June 1984  
(Thousand Barrels per Day)

Commodity	Supply				Disposition				
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied
Crude Oil (including lease condensate)	E 8,714	0	3,369	-243	422	1	12,001	198	63
Natural Gas Liquids and LRGs									
Pentanes Plus	1,600	371	254	-1	0	0	475	50	1,700
Liquefied Petroleum Gases	285	0	41	-10	0	0	195	3	119
Ethane	1,315	371	212	9	0	0	280	47	1,580
Propane	500	23	88	1	0	0	2	5	604
Normal Butane	518	278	66	(s)	0	0	4	27	831
Isobutane	200	71	35	4	0	0	157	12	141
	97	-1	23	4	0	0	117	3	4
Other Liquids									
Other Hydrocarbons and Alcohol	47	0	320	-42	0	0	549	0	-224
Unfinished Oils	47	0	0	(s)	0	0	46	0	0
Motor Gasoline Blending Components	0	0	248	-18	0	0	399	0	-170
Aviation Gasoline Blending Components	0	0	73	-24	0	0	103	0	-54
	0	0	0	(s)	0	0	(s)	0	0
Finished Petroleum Products									
Finished Motor Gasoline	6	13,205	1,521	17	0	0	0	467	14,280
Finished Leaded Motor Gasoline	3	6,418	298	-103	0	0	0	5	6,612
Finished Unleaded Motor Gasoline	2	2,649	147	-14	0	0	0	5	2,779
Finished Aviation Gasoline	1	3,769	151	-88	0	0	0	0	3,833
Naphtha-Type Jet Fuel	0	24	2	(s)	0	0	0	0	25
Kerosene-Type Jet Fuel	0	200	19	-4	0	0	0	1	215
Kerosene	0	892	49	-20	0	0	0	4	916
Distillate Fuel Oil	(s)	110	8	(s)	0	0	0	(s)	118
Residual Fuel Oil	1	2,628	262	151	0	0	0	47	2,995
Naphtha < 400 Deg. for Petro. Feed. Use	0	891	776	13	0	0	0	159	1,521
Other Oils > 400 Deg. for Petro. Feed. Use	0	135	28	-1	0	0	0	7	155
Special Naphthas	0	271	0	-1	0	0	0	17	253
Lubricants	(s)	56	52	1	0	0	0	3	105
Waxes	0	159	11	6	0	0	0	17	159
Petroleum Coke	0	14	1	1	0	0	0	1	16
Asphalt and Road Oil	0	450	0	5	0	0	0	205	250
Still Gas	0	326	1	-28	0	0	0	(s)	299
Miscellaneous Products	0	565	0	0	0	0	0	0	565
	2	64	15	-2	0	0	0	1	77
Total	10,367	13,576	5,463	-270	422	1	13,024	715	15,819

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) = Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 6. PAD District I, Supply and Disposition of Crude Oil and Petroleum Products, June 1984  
(Thousand Barrels)

Commodity	Supply					Disposition				Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports	Products Supplied
<b>Crude Oil (including lease condensate)</b> .....	E 1,854	0	26,167	887	3,365	3,123	1	35,395	0	0
Natural Gas Liquids and LRGs .....	870	1,238	1,403	-347	0	1,487	0	204	16	4,432
Liquefied Petroleum Gases .....	777	1,238	610	-343	0	1,487	0	166	16	3,587
Pentanes Plus .....	93	0	794	-4	0	0	0	38	0	845
<b>Other Liquids</b> .....	65	0	3,210	311	0	167	0	4,314	0	-561
Other Hydrocarbons and Alcohol .....	65	0	0	-57	0	0	0	8	0	0
Unfinished Oils .....	0	0	1,814	1,010	0	130	0	4,509	0	-1,555
Motor Gasoline Blending Components .....	0	0	1,395	-631	0	37	0	-192	0	993
Aviation Gasoline Blending Components .....	0	0	0	-11	0	0	0	-11	0	0
<b>Finished Petroleum Products</b> .....	65	40,424	35,493	-4,210	0	65,407	0	0	512	136,667
Finished Motor Gasoline .....	65	17,604	6,876	2,411	0	41,172	0	0	58	68,070
Finished Leaded Motor Gasoline .....	38	5,254	2,147	902	0	14,089	0	0	58	22,372
Finished Unleaded Motor Gasoline .....	27	12,350	4,730	1,509	0	27,083	0	0	0	45,699
Finished Aviation Gasoline .....	0	10	234	-73	0	259	0	0	0	430
Naphtha-Type Jet Fuel .....	0	891	447	51	0	79	0	0	0	1,468
Kerosene-Type Jet Fuel .....	0	1,154	753	-799	0	8,491	0	0	0	9,599
Kerosene .....	0	128	273	-296	0	226	0	0	4	327
Distillate Fuel Oil .....	0	9,385	7,322	-7,412	0	12,417	0	0	2	21,710
Residual Fuel Oil .....	0	3,346	18,223	1,181	0	1,675	0	0	0	24,425
Naphtha and Other Oils for Petro. Feed. ....	0	322	7	-2	0	-8	0	0	49	270
Special Naphthas .....	0	40	415	-21	0	147	0	0	6	575
Lubricants .....	0	654	237	-34	0	529	0	0	152	1,233
Waxes .....	0	81	29	6	0	10	0	0	4	122
Petroleum Coke .....	0	1,215	0	9	0	0	0	0	221	1,003
Asphalt and Road Oil .....	0	3,494	91	710	0	179	0	0	2	4,472
Still Gas .....	0	1,802	0	0	0	0	0	0	0	1,802
Miscellaneous Products .....	0	298	586	59	0	231	0	0	14	1,160
<b>Total</b> .....	2,854	41,662	66,273	-3,359	3,365	70,184	1	39,913	527	140,538
										189,056

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) = Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 7. PAD District II, Supply and Disposition of Crude Oil and Petroleum Products, June 1984  
(Thousand Barrels)

Commodity	Supply					Disposition				Ending Stocks	
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports		Products Supplied
<b>Crude Oil (including lease condensate)</b>	<b>E 31,293</b>	<b>0</b>	<b>14,073</b>	<b>1,483</b>	<b>40,517</b>	<b>2,312</b>	<b>11</b>	<b>89,218</b>	<b>428</b>	<b>0</b>	<b>77,934</b>
<b>Natural Gas Liquids and LRGs</b>	<b>9,877</b>	<b>2,347</b>	<b>3,160</b>	<b>-1,506</b>	<b>0</b>	<b>1,379</b>	<b>0</b>	<b>4,229</b>	<b>525</b>	<b>10,503</b>	<b>36,100</b>
Liquefied Petroleum Gases	8,497	2,347	3,160	-1,400	0	1,285	0	2,902	446	10,540	32,264
Pentanes Plus	1,380	0	0	-106	0	94	0	1,327	79	-38	3,836
<b>Other Liquids</b>	<b>349</b>	<b>0</b>	<b>214</b>	<b>319</b>	<b>0</b>	<b>-804</b>	<b>0</b>	<b>1,115</b>	<b>0</b>	<b>-1,037</b>	<b>24,793</b>
Other Hydrocarbons and Alcohol	349	0	0	-8	0	0	0	341	0	0	137
Unfinished Oils	0	0	214	-219	0	-804	0	23	0	-832	17,325
Motor Gasoline Blending Components	0	0	0	542	0	0	0	747	0	-205	7,175
Aviation Gasoline Blending Components	0	0	0	4	0	0	0	4	0	0	156
<b>Finished Petroleum Products</b>	<b>19</b>	<b>95,886</b>	<b>904</b>	<b>-231</b>	<b>0</b>	<b>23,619</b>	<b>0</b>	<b>0</b>	<b>544</b>	<b>119,652</b>	<b>119,539</b>
Finished Motor Gasoline	0	52,962	82	2,282	0	14,345	0	0	0	69,671	58,308
Finished Leaded Motor Gasoline	0	23,127	45	1,490	0	7,161	0	0	0	31,823	29,154
Finished Unleaded Motor Gasoline	0	29,835	37	792	0	7,184	0	0	0	37,848	29,154
Finished Aviation Gasoline	0	97	0	-11	0	166	0	0	0	252	532
Naphtha-Type Jet Fuel	0	830	0	-32	0	51	0	0	0	849	1,547
Kerosene-Type Jet Fuel	0	4,008	0	179	0	647	0	0	0	4,834	7,847
Kerosene	0	295	0	357	0	3	0	0	0	655	1,613
Distillate Fuel Oil	0	22,169	438	-4,677	0	7,728	0	0	0	25,658	31,744
Residual Fuel Oil	0	1,535	133	364	0	-68	0	0	0	1,964	3,579
Naptha and Other Oils for Petro. Feed.	0	873	4	-23	0	36	0	0	50	840	192
Special Naphthas	0	470	199	-4	0	120	0	0	3	783	507
Lubricants	0	665	14	-215	0	417	0	0	31	850	2,088
Waxes	0	30	5	-9	0	0	0	0	(s)	26	57
Petroleum Coke	0	3,308	0	84	0	0	0	0	457	2,935	1,086
Asphalt and Road Oil	0	4,558	0	1,370	0	393	0	0	1	6,320	10,205
Still Gas	0	3,820	0	0	0	0	0	0	0	3,820	0
Miscellaneous Products	19	266	29	104	0	-219	0	0	2	196	234
<b>Total</b>	<b>41,538</b>	<b>98,233</b>	<b>18,350</b>	<b>45</b>	<b>40,517</b>	<b>26,506</b>	<b>11</b>	<b>94,562</b>	<b>1,497</b>	<b>129,118</b>	<b>258,366</b>

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) = Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 8. PAD District III, Supply and Disposition of Crude Oil and Petroleum Products, June 1984  
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports	Products Supplied	
Crude Oil (including lease condensate) .....	E 124,899	0	52,794	-7,152	-19,510	10,256	25	161,239	0	23	578,449
Natural Gas Liquids and LRGs .....	33,854	7,147	401	-4,120	0	-1,286	0	7,565	931	27,500	74,253
Liquefied Petroleum Gases .....	27,742	7,147	366	-3,742	0	-1,425	0	3,081	931	26,076	67,926
Pentanes Plus .....	6,112	0	35	-378	0	139	0	4,484	0	1,424	6,327
Other Liquids .....	584	0	4,851	10,137	0	-207	0	21,684	0	-6,319	67,393
Other Hydrocarbons and Alcohol .....	584	0	0	2	0	0	0	586	0	0	99
Unfinished Oils .....	0	0	4,833	9,636	0	-170	0	18,836	0	-4,537	49,462
Motor Gasoline Blending Components .....	0	0	18	451	0	-37	0	2,214	0	-1,782	17,683
Aviation Gasoline Blending Components .....	0	0	0	48	0	0	0	48	0	0	149
Finished Petroleum Products .....	93	190,472	3,780	-3,992	0	-91,573	0	0	7,203	91,577	124,163
Finished Motor Gasoline .....	8	88,566	441	1,558	0	-57,134	0	0	0	33,364	53,287
Finished Leaded Motor Gasoline .....	8	34,310	214	1,372	0	-21,978	0	0	76	13,851	23,946
Finished Unleaded Motor Gasoline .....	0	54,256	227	186	0	-35,156	0	0	0	19,513	29,341
Finished Aviation Gasoline .....	0	459	0	95	0	-447	0	0	0	107	715
Naphtha-Type Jet Fuel .....	0	2,725	29	-118	0	-236	0	0	81	2,319	2,231
Kerosene-Type Jet Fuel .....	0	13,593	0	-1,137	0	-9,784	0	0	155	2,517	12,700
Kerosene .....	0	2,265	0	-336	0	-229	0	0	1	1,699	2,524
Distillate Fuel Oil .....	40	38,787	1	-2,445	0	-20,364	0	0	472	15,547	26,077
Residual Fuel Oil .....	0	9,952	1,480	-1,158	0	-1,607	0	0	0	7,561	11,214
Naphtha and Other Oils for Petro. Feed .....	0	11,199	1,033	-406	0	-28	0	0	1,106	10,944	3,225
Special Naphthas .....	0	1,063	720	-156	0	-267	0	0	854	1,320	1,549
Lubricants .....	0	3,213	48	96	0	-916	0	0	216	2,225	4,625
Waxes .....	0	279	5	-28	0	-10	0	0	29	217	391
Petroleum Coke .....	0	5,502	0	-52	0	0	0	0	4,170	1,280	1,229
Asphalt and Road Oil .....	0	3,839	22	126	0	-572	0	0	(S)	3,415	3,278
Still Gas .....	0	8,020	0	0	0	0	0	0	0	8,020	0
Miscellaneous Products .....	45	1,010	1	-31	0	21	0	0	4	1,043	1,118
Total .....	159,430	197,619	61,826	-5,127	-19,510	-82,810	25	190,488	8,134	112,781	844,258

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(S) = Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 9. PAD District IV, Supply and Disposition of Crude Oil and Petroleum Products, June 1984  
(Thousand Barrels)

Commodity	Supply					Net Receipts	Disposition				Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil		Crude Losses	Refinery Inputs	Exports	Products Supplied	
Crude Oil (including lease condensate)	E 17,001	0	944	525	-4,792	0	1	13,671	0	6	13,459
Natural Gas Liquids and LRGs	2,599	106	321	37	0	-1,580	0	435	0	1,048	1,183
Liquefied Petroleum Gases	1,784	106	208	34	0	-1,347	0	322	0	463	931
Pentanes Plus	815	0	112	3	0	-233	0	113	0	584	252
Other Liquids	0	0	0	186	0	0	0	-12	0	198	5,068
Other Hydrocarbons and Alcohol	0	0	0	0	0	0	0	0	0	0	0
Unfinished Oils	0	0	0	9	0	0	0	-193	0	202	2,719
Motor Gasoline Blending Components	0	0	0	177	0	0	0	181	0	-4	2,349
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0
Finished Petroleum Products	6	14,301	147	1,011	0	-306	0	0	3	15,156	13,568
Finished Motor Gasoline	2	7,292	47	729	0	-160	0	0	0	7,910	5,592
Finished Leaded Motor Gasoline	2	4,296	45	402	0	-264	0	0	0	4,481	3,595
Finished Unleaded Motor Gasoline	0	2,996	2	327	0	104	0	0	0	3,429	1,997
Finished Aviation Gasoline	0	20	0	8	0	22	0	0	0	50	56
Naphtha-Type Jet Fuel	0	443	0	-45	0	-130	0	0	0	268	333
Kerosene-Type Jet Fuel	0	758	0	45	0	353	0	0	0	1,156	788
Kerosene	0	0	0	2	0	0	0	0	0	2	37
Distillate Fuel Oil	0	3,877	97	-50	0	-391	0	0	0	3,533	3,463
Residual Fuel Oil	0	230	2	41	0	0	0	0	0	273	510
Naphtha and Other Oils for Petro. Feed	0	0	0	0	0	0	0	0	1	-1	3
Special Naphthas	0	3	(s)	-1	0	0	0	0	0	2	9
Lubricants	0	32	(s)	2	0	0	0	0	1	33	72
Waxes	0	11	0	0	0	0	0	0	0	11	0
Petroleum Coke	0	258	0	-6	0	0	0	0	0	252	174
Asphalt and Road Oil	0	859	0	281	0	0	0	0	1	1,139	2,521
Still Gas	0	487	0	0	0	0	0	0	0	487	0
Miscellaneous Products	4	31	(s)	5	0	0	0	0	(s)	40	10
Total	19,606	14,407	1,411	1,759	-4,792	-1,885	1	14,094	3	16,408	33,278

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) = Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 10. PAD District V, Supply and Disposition of Crude Oil and Petroleum Products, June 1984  
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil	Net Receipts	Crude Losses	Refinery Inputs	Exports	Products Supplied	
Crude Oil (including lease condensate)	E 87,243	0	8,334	1,441	-4,870	-15,691	29	68,378	6,237	1,813	81,530
Natural Gas Liquids and LRGs	991	1,239	394	-201	0	0	0	876	186	1,362	1,834
Liquefied Petroleum Gases	557	1,239	394	-210	0	0	0	637	186	1,783	1,783
Pentanes Plus	434	0	0	9	0	0	0	239	0	204	51
Other Liquids	263	0	786	1,251	0	844	0	3,569	0	-425	34,878
Other Hydrocarbons and Alcohol	263	0	0	1	0	0	0	264	0	0	2
Unfinished Oils	0	0	15	1,004	0	844	0	3,169	0	-1,306	26,314
Motor Gasoline Blending Components	0	0	771	228	0	0	0	118	0	881	8,551
Aviation Gasoline Blending Components	0	0	0	18	0	0	0	18	0	0	11
Finished Petroleum Products	0	74,730	1,738	-969	0	2,853	0	0	9,340	69,012	58,975
Finished Motor Gasoline	0	32,099	718	-461	0	1,777	0	0	381	33,752	23,188
Finished Leaded Motor Gasoline	0	12,854	177	309	0	992	0	0	381	13,952	10,784
Finished Unleaded Motor Gasoline	0	19,245	541	-770	0	785	0	0	0	19,801	12,404
Finished Aviation Gasoline	0	413	0	-82	0	0	0	0	0	331	572
Naphtha-Type Jet Fuel	0	1,383	8	-184	0	236	0	0	0	1,443	1,917
Kerosene-Type Jet Fuel	0	7,827	90	51	0	293	0	0	36	8,225	5,665
Kerosene	0	175	0	-2	0	0	0	0	(s)	173	245
Distillate Fuel Oil	0	12,125	126	-126	0	610	0	0	1,114	11,621	11,641
Residual Fuel Oil	0	10,161	445	-948	0	0	0	0	4,169	5,489	9,595
Naphtha and Other Oils for Petro. Feed	0	340	0	440	0	0	0	0	98	682	209
Special Naphthas	0	118	271	2	0	0	0	0	243	148	215
Lubricants	0	331	75	24	0	-30	0	0	76	324	1,262
Waxes	0	70	3	-6	0	0	0	0	4	54	54
Petroleum Coke	0	3,388	0	308	0	0	0	0	3,214	482	1,533
Asphalt and Road Oil	0	2,274	0	224	0	0	0	0	(s)	2,498	2,341
Still Gas	0	3,881	0	0	0	0	0	0	0	3,881	0
Miscellaneous Products	0	145	1	-209	0	-33	0	0	3	-99	538
Total	88,497	75,969	11,251	1,522	-4,870	-11,994	29	72,823	15,763	71,761	177,217

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) = Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 11. Production of Crude Oil (including Lease Condensate) by PAD District and State, for the Most Currently Available Month,<sup>1</sup> April 1984  
(Thousand Barrels)

Table 11. Production of Crude Oil (including Lease Condensate) by PAD District and State, for the Most Currently Available Month,<sup>1</sup> April 1984  
(Thousand Barrels)

—Continued

PAD District and State		Production		PAD District and State		Production	
	Total	Daily Average			Total	Daily Average	
<b>PAD District I</b>							
Florida .....	1,215	41	PAD District IV				
New York .....	E 69	E 2	Colorado .....		E 2,358	E 79	
Pennsylvania .....	E 351	E 12	Montana .....		E 2,304	E 77	
Virginia .....	E 3	E 0	Utah .....		E 2,640	E 88	
West Virginia .....	320	11	Wyoming .....		E 9,798	E 327	
Adjustment 2 .....	-11	(s)	Adjustment 2 .....		-72	-2	
Total PAD District I .....	E 1,947	E 65	Total PAD District IV .....		E 17,028	E 568	
<b>PAD District II</b>							
Illinois .....	2,326	78	PAD District V				
Indiana .....	518	17	Alaska .....				
Kansas .....	6,365	212	South Alaska .....		1,939	65	
Kentucky .....	623	21	North Slope .....		51,150	1,705	
Michigan .....	2,699	90	Adjustment for Alaska <sup>2</sup> .....		-1,348	-45	
Missouri .....	E 15	E 1	Total Alaska .....		51,741	1,725	
Nebraska .....	500	17	Arizona .....		19	1	
North Dakota .....	4,261	142	California .....		6,154	205	
Ohio .....	E 1,197	E 40	Central Coastal .....		20,860	695	
Oklahoma .....	14,307	477	East Central .....		16	1	
South Dakota .....	102	3	North .....		6,528	218	
Tennessee .....	79	3	South .....		33,568	1,119	
Adjustment 2 .....	-1,819	-61	Total California .....		103	3	
Total PAD District II .....	E 31,173	E 1,039	Nevada .....		-216	-7	
<b>PAD District III</b>							
Alabama .....	1,533	51	Adjustment for Arizona, California, and Nevada <sup>2</sup> .....		85,215	2,841	
Arkansas .....	E 1,509	E 50	Total PAD District V .....		E 260,643	E 8,688	
Louisiana .....	38,298	1,277	United States Total .....				
Gulf Coast .....	2,671	89					
Rest of State .....	40,969	1,366					
Total Louisiana .....	2,653	88					
Mississippi .....	543	18					
New Mexico .....	5,845	195					
Northwestern .....	6,388	213					
Southeastern .....	2,148	72					
Total New Mexico .....	3,221	107					
Texas .....	10,333	344					
TRRC District 01 .....	2,444	81					
TRRC District 02 .....	670	22					
TRRC District 03 .....	3,506	117					
TRRC District 04 .....	2,969	89					
TRRC District 05 .....	2,954	98					
TRRC District 06, excluding East Texas .....	19,017	634					
TRRC District 07C .....	17,928	598					
TRRC District 08 .....	3,319	111					
TRRC District 09 .....	1,920	64					
TRRC District 10 .....	4,084	136					
East Texas .....	74,513	2,484					
Total Texas .....	-2,285	-76					
Adjustment 2 .....							
Total PAD District III .....	E 125,280	E 4,176					

<sup>1</sup> Includes the following offshore production (thousand barrels):

Alaska: State - 1,701;  
California: Federal - 2,493, State - 3,174;  
Louisiana: Federal - 25,494, State - 2,222;  
Texas: Federal - 1,757, State - 159;  
U.S. Total - 37,000

<sup>2</sup> These adjustments are used to reconcile the national and PADD level sums of the State data with the independently estimated U.S. and Alaskan figures shown in the Summary Statistics portion of this issue and with the PADD level figures published in a previous issue. Final data at the State, PAD District and national levels will be published without adjustments in the Petroleum Supply Annual.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

- Data not available.

E = Estimated.

See footnotes at end of table.



Table 12. Natural Gas Processing Plant Production of Petroleum Products by PAD District,<sup>1</sup> June 1984  
(Thousand Barrels)

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		Rocky Mt.	Dist. V West Coast
Natural Gas Liquids .....	356	514	870	3	1,645	476	7,753	9,877	19,323	2,991	7,012	588	3,940	33,854	2,599	991	48,191
Pentanes Plus .....	30	63	93	1	225	124	1,030	1,380	3,635	255	1,286	177	759	6,112	815	434	8,834
Liquefied Petroleum Gases .....	326	451	777	2	1,420	352	6,723	8,497	15,688	2,736	5,726	411	3,181	27,742	1,784	557	39,357
Ethane .....	96	149	245	0	581	4	2,977	3,562	6,172	1,093	2,516	63	1,016	10,860	217	3	14,887
Propane .....	138	194	332	1	503	203	2,498	3,205	5,964	1,175	1,976	173	1,300	10,588	1,000	332	15,457
Normal Butane .....	72	79	151	1	184	119	812	1,116	2,554	216	659	123	581	4,133	450	158	6,008
Isobutane .....	20	29	49	0	152	26	436	614	998	252	575	52	284	2,161	117	64	3,005
Finished Petroleum Products .....	65	0	65	0	1	0	18	19	27	49	2	8	7	93	6	0	183
Finished Motor Gasoline .....	65	0	65	0	0	0	0	0	6	0	0	0	2	8	2	0	75
Finished Leaded Motor Gasoline .....	38	0	38	0	0	0	0	0	6	0	0	0	2	8	2	0	48
Finished Unleaded Motor Gasoline .....	27	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Finished Aviation Gasoline .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Naphtha-Type Jet Fuel .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kerosene-Type Jet Fuel .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kerosene .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distillate Fuel Oil .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Special Naphthas .....	0	0	0	0	0	0	0	0	0	40	0	0	0	40	0	0	40
Miscellaneous Products .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Production .....	421	514	935	3	1,646	476	7,771	9,896	19,350	3,040	7,014	596	3,947	33,947	2,605	991	48,374

<sup>1</sup> Production represents quantity of natural gas processing plant output less input to fractionating facilities.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 13. Refinery Input of Crude Oil and Petroleum Products by PAD District, June 1984  
(Thousand Barrels, Except Where Noted)

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		Rocky Mt.	Dist. V West Coast
Crude Oil (including lease condensate) .....	33,010	2,385	35,395	1,745	59,495	8,682	19,296	89,218	16,025	78,916	58,399	5,563	2,336	161,239	13,671	68,378	367,901
Pentanes Plus .....	38	0	38	0	612	50	665	1,327	1,039	2,920	349	81	95	4,484	113	239	6,201
Liquefied Petroleum Gases .....	132	34	166	111	1,963	264	564	2,902	323	1,050	1,536	128	44	3,081	322	637	7,108
Ethane .....	0	0	0	0	2	0	0	2	0	0	51	0	0	51	0	0	53
Propane .....	0	0	0	0	67	0	0	67	0	1	38	0	0	39	0	1	107
Normal Butane .....	92	34	126	35	906	200	143	1,284	70	501	791	25	13	1,400	242	398	3,450
Isobutane .....	40	0	40	76	988	64	421	1,549	253	548	656	103	31	1,591	80	238	3,498
Other Liquids																	
Other Hydrocarbons and Alcohol .....	8	0	8	0	328	0	13	341	0	208	376	0	2	586	0	264	1,199
Unfinished Oil (net) .....	4,436	73	4,509	-2	157	-274	142	23	163	14,390	4,176	-10	117	18,836	-193	3,169	26,344
Motor Gasoline Blending																	
Components (net) .....	-198	6	-192	4	710	10	23	747	154	255	1,743	53	9	2,214	181	118	3,068
Aviation Gasoline Blending																	
Components (net) .....	-11	0	-11	0	51	0	-47	4	0	0	48	0	0	48	0	18	59
Total Input to Refineries .....	37,415	2,498	39,913	1,858	63,316	8,732	20,656	94,562	17,704	97,739	66,627	5,815	2,603	190,488	14,094	72,823	411,880
Crude Oil Distillation																	
Gross Input (daily average) .....	1,071	80	1,150	58	1,999	295	653	3,005	544	2,703	1,968	187	77	5,481	458	2,298	12,393
Operable Capacity (daily average) .....	1,404	174	1,578	66	2,329	304	787	3,486	604	3,802	2,539	294	109	7,348	558	3,100	16,070
Operating Ratio (percent)1 .....	76.3	45.6	72.9	88.1	85.8	97.0	83.0	86.2	90.2	71.1	77.6	63.8	70.8	74.6	82.2	74.1	77.1
Crude Oil Qualities																	
Sulfur Content, Weighted Average (percent) .....	.94	.34	.89	.56	.90	1.78	.61	.92	.62	.97	.98	1.46	.74	.95	.91	1.01	.95
API Gravity, Weighted Average .....	32.11	40.17	32.70	37.16	35.61	30.96	37.81	35.66	37.40	34.35	33.00	32.25	39.32	34.17	35.09	25.60	32.83
Operable Capacity (daily average)	1,404	174	1,578	66	2,329	304	787	3,486	604	3,802	2,539	294	109	7,348	558	3,100	16,070
Operating .....	1,257	110	1,367	66	2,154	301	726	3,247	584	3,622	2,362	238	107	6,913	530	2,894	14,950
Idle .....	147	64	211	0	175	3	61	239	20	181	176	56	2	435	28	207	1,120

<sup>1</sup> Represents gross input divided by operable capacity.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 14. Refinery Production of Petroleum Products by PAD District, June 1984  
(Thousand Barrels)

Commodity	PAD District I			PAD District II				PAD District III				PAD		United States				
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast		No. La., Ark.		New Mexico	Total	Dist. IV Rocky Mt.	Dist. V West Coast
Liquefied Refinery Gases .....	1,224	14	1,238	37	1,817	229	264	2,347	342	2,913	3,723	62	107	7,147	106	1,239	12,077	
For Petrochemical Feedstock Use .....	444	0	444	0	206	17	42	265	31	1,096	1,929	0	0	3,056	12	204	3,961	
For Other Uses .....	780	14	794	37	1,611	212	222	2,082	311	1,817	1,794	62	107	4,091	94	1,035	8,096	
Ethane .....	32	0	32	0	0	0	0	0	0	385	15	0	0	400	0	432		
For Petrochemical Feedstock Use .....	0	0	0	0	0	0	0	0	0	188	1	0	0	189	0	189		
For Other Uses .....	32	0	32	0	0	0	0	0	0	197	14	0	0	211	0	243		
Propane .....	963	14	977	37	1,812	209	425	2,483	307	2,152	1,464	56	58	4,037	147	960	8,604	
For Petrochemical Feedstock Use .....	384	0	384	0	206	0	42	248	31	791	242	0	0	1,064	0	193	1,989	
For Other Uses .....	579	14	593	37	1,606	209	383	2,235	276	1,361	1,222	56	58	2,973	147	767	6,715	
Normal Butane .....	229	0	229	0	5	20	-161	-136	35	404	2,244	6	49	2,738	-52	280	3,059	
For Petrochemical Feedstock Use .....	60	0	60	0	0	17	0	17	0	145	1,686	0	0	1,831	1	12	1,921	
For Other Uses .....	169	0	169	0	5	3	-161	-153	35	259	558	6	49	907	-53	268	1,138	
Isobutane for Petro. Feed. Use .....	0	0	0	0	0	0	0	0	0	-28	0	0	0	-28	11	-1	-18	
Finished Motor Gasoline .....	16,781	823	17,604	1,048	36,188	4,421	11,305	52,962	8,929	45,111	31,709	1,747	1,070	88,566	7,292	32,099	198,523	
Finished Leaded Motor Gasoline .....	4,892	362	5,254	474	14,216	2,232	6,205	23,127	4,520	16,152	12,301	756	581	34,310	4,296	12,854	79,841	
Finished Unleaded Motor Gasoline .....	11,889	461	12,350	574	21,972	2,189	5,100	29,835	4,409	28,959	19,408	991	489	54,256	2,996	19,245	118,682	
Finished Aviation Gasoline .....	10	0	10	0	80	0	17	97	16	283	160	0	0	459	20	413	999	
Naphtha-Type Jet Fuel .....	850	41	891	77	474	109	170	830	934	739	514	119	419	2,725	443	1,383	6,272	
Kerosene-Type Jet Fuel .....	1,154	0	1,154	7	3,151	343	507	4,008	894	5,810	6,773	7	109	13,593	758	7,827	27,340	
Kerosene .....	59	69	128	45	189	12	49	295	29	1,220	930	38	48	2,265	0	175	2,863	
Distillate Fuel Oil .....	8,674	711	9,385	450	13,193	2,405	6,121	22,169	4,272	19,046	13,058	1,718	693	38,787	3,877	12,125	86,343	
Residual Fuel Oil .....	3,262	84	3,346	59	1,045	164	267	1,535	638	6,450	2,621	233	10	9,952	230	10,161	25,224	
Naphtha < 400 Deg. For Petro. Feed. Use .....	317	0	317	0	687	0	70	757	122	2,855	154	17	0	3,158	0	146	4,378	
Other Oils > 400 Deg. For Petro. Feed. Use .....	5	0	5	0	116	0	0	116	127	5,450	2,464	0	0	8,041	0	194	8,356	
Special Naphthas .....	11	29	40	0	280	0	190	470	91	790	69	113	0	1,063	3	118	1,694	
Lubricants .....	291	363	654	0	552	0	113	665	24	1,938	889	362	0	3,213	32	331	4,895	
Waxes .....	0	81	81	0	27	0	3	30	6	108	102	63	0	279	11	70	471	
Petroleum Coke .....	1,196	19	1,215	26	2,171	529	582	3,308	292	2,705	2,425	69	11	5,502	258	3,388	13,671	
Marketable .....	439	0	439	0	1,104	407	390	1,901	58	1,103	1,641	44	0	2,846	107	2,602	7,895	
Catalyst .....	757	19	776	26	1,067	122	192	1,407	234	1,602	784	25	11	2,656	151	786	5,776	
Asphalt and Road Oil .....	3,402	92	3,494	103	3,204	562	689	4,558	643	600	1,372	1,110	114	3,839	859	2,274	15,024	
Still Gas .....	1,708	94	1,802	45	2,639	341	795	3,820	459	4,700	2,641	156	64	8,020	487	3,881	18,010	
For Petrochemical Feedstock Use .....	163	0	163	0	2	0	0	2	5	553	160	0	0	718	1	147	1,031	
For Other Uses .....	1,545	94	1,639	45	2,637	341	795	3,818	454	4,147	2,481	156	64	7,302	486	3,734	16,979	
Miscellaneous Products .....	248	50	298	3	174	32	57	266	9	657	295	49	0	1,010	31	145	1,750	
Fuel Use .....	117	17	134	0	0	0	0	0	0	-38	188	0	0	150	12	17	313	
Non-Fuel Use .....	131	33	164	3	174	32	57	266	9	695	107	49	0	860	19	128	1,437	
Total Production .....	39,192	2,470	41,662	1,900	65,987	9,147	21,199	98,233	17,827	101,385	69,899	5,863	2,645	197,619	14,407	75,969	427,890	
Processing Gain(-) or Loss(+) <sup>1)</sup> .....	-1,777	28	-1,749	-42	-2,671	-415	-543	-3,671	-123	-3,646	-3,272	-48	-42	-7,131	-313	-3,146	-16,010	

<sup>1</sup> Represents the arithmetic difference between input and output.

Note: See Explanatory Note 2.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 15. Percent Refinery Yield of Petroleum Products by PAD District<sup>1</sup> June 1984

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La., Gulf Coast	No. La., Ark.	New Mexico	Total		Rocky Mtn.	Dist. V West Coast
Finished Motor Gasoline <sup>2</sup> .....	44.9	31.9	44.1	53.5	54.6	48.7	51.7	53.4	45.8	43.6	44.3	26.7	37.5	43.4	49.5	43.1	45.9
Finished Aviation Gasoline <sup>3</sup> .....	.1	.0	.1	.0	.0	.0	.3	.1	.1	.3	.2	.0	.0	.2	.1	.6	.2
Liquefied Refinery Gases .....	3.3	.6	3.1	2.1	3.0	2.7	1.4	2.6	2.1	3.1	5.9	1.1	4.4	4.0	.8	1.7	3.1
Naphtha-Type Jet Fuel .....	2.3	1.7	2.2	4.4	.8	1.3	.9	.9	5.8	.8	.8	2.1	17.1	1.5	3.3	1.9	1.6
Kerosene-Type Jet Fuel .....	3.1	0	2.9	.4	5.3	4.1	2.6	4.5	5.5	6.2	10.8	.1	4.4	7.5	5.6	10.9	6.9
Kerosene .....	.2	2.8	.3	2.6	.3	.1	.3	.3	.2	1.3	1.5	.7	2.0	1.3	0	.2	.7
Distillate Fuel Oil .....	23.2	28.9	23.5	25.8	22.1	28.6	31.5	24.8	26.4	20.4	20.9	30.9	28.3	21.5	28.8	16.9	21.9
Residual Fuel Oil .....	8.7	3.4	8.4	3.4	1.8	2.0	1.4	1.7	3.9	6.9	4.2	4.2	.4	5.5	1.7	14.2	6.4
Naphtha < 400 Deg. F. Petro. Feed. Use .....	.8	0	.8	0	1.2	0	.4	.8	.8	3.1	.2	.3	0	1.8	0	.2	1.1
Other Oils > 400 Deg. F. Petro. Feed. Use .....	.0	0	.0	0	.2	0	0	.1	.8	5.8	.3	0	0	4.5	.0	.3	2.1
Special Naphthas .....	.0	1.2	.1	0	.5	0	1.0	.5	.6	.8	.1	2.0	0	.6	.0	.2	.4
Lubricants .....	.8	14.8	1.6	0	.9	0	.6	.7	.1	2.1	1.4	6.5	0	1.8	.2	.5	1.2
Waxes .....	.0	3.3	.2	0	.0	0	.0	.0	.0	.1	.2	1.1	0	.2	.1	.1	.1
Petroleum Coke .....	3.2	.8	3.0	1.5	3.6	6.3	3.0	3.7	1.8	2.9	3.9	1.2	.4	3.1	1.9	4.7	3.5
Asphalt and Road Oil .....	9.1	3.7	8.8	5.9	5.4	6.7	3.5	5.1	4.0	.6	2.2	20.0	4.6	2.1	6.4	3.2	3.8
Still Gas .....	4.6	3.8	4.5	2.6	4.4	4.1	4.1	4.3	2.8	5.0	4.2	2.8	2.6	4.5	3.6	5.4	4.6
Miscellaneous Products .....	.7	2.0	.7	.2	.3	.4	.3	.3	.1	.7	.5	.9	0	.6	.2	.2	.4
Processing Gain(-) or Loss(+) <sup>4</sup> .....	-4.7	1.1	-4.4	-2.4	-4.5	-4.9	-2.8	-4.1	-8	-3.9	-5.2	-9	-1.7	-4.0	-2.3	-4.4	-4.1

<sup>1</sup> Based on crude oil input and net returns of unfinished oils.<sup>2</sup> Based on total finished motor gasoline output plus net output of motor gasoline blending components, minus input of natural gas plant liquids, other hydrocarbons and alcohol.<sup>3</sup> Based on finished aviation gasoline output plus net output of aviation gasoline blending components.<sup>4</sup> Represents the difference between input and production.

Note: Total may not equal sum of components due to independent rounding.

Note: See Explanatory 2.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 16. Imports of Crude Oil and Petroleum Products by PAD District, June 1984  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					
	I	II	III	IV	V	Total
Crude Oil (including lease condensate) 1 2	26,167	14,073	52,794	944	8,334	102,311
Natural Gas Liquids	1,403	3,160	401	321	394	5,679
Pentanes Plus	794	0	35	112	0	941
Liquefied Petroleum Gases	610	3,160	366	208	394	4,738
Ethane	0	1,761	0	0	0	1,761
Propane	347	785	155	87	36	1,410
Normal Butane	158	368	134	73	215	948
Isobutane	105	246	77	48	143	619
Other Liquids 1	3,210	214	4,851	0	786	9,060
Unfinished Oils 1	1,814	214	4,833	0	15	6,875
Motor Gasoline Blending Components	1,395	0	18	0	771	2,185
Aviation Gasoline Blending Components	0	0	0	0	0	0
Finished Petroleum Products	35,493	904	3,780	147	1,738	42,061
Finished Motor Gasoline	6,876	82	441	47	718	8,165
Finished Leaded Motor Gasoline	2,147	45	214	45	177	2,629
Finished Unleaded Motor Gasoline	4,730	37	227	2	541	5,536
Finished Aviation Gasoline	234	0	0	0	0	234
Naphtha-Type Jet Fuel	447	0	29	0	8	485
Kerosene-Type Jet Fuel	753	0	0	0	90	843
Bonded Aircraft Fuel	0	0	0	0	0	0
Other	753	0	0	0	90	843
Kerosene	273	0	0	0	0	273
Distillate Fuel Oil	7,322	438	1	97	126	7,985
Bonded Ships Bunkers	0	0	0	0	0	0
Other	7,322	438	1	97	126	7,985
Residual Fuel Oil	18,223	133	1,480	2	445	20,283
Bonded Ships Bunkers	0	0	0	0	0	0
Other	18,223	133	1,480	2	445	20,283
Naphtha < 400 Deg. for Petro. Feed. Use	7	4	1,033	0	0	1,044
Other Oils > 400 Deg. for Petro. Feed. Use	0	0	0	0	0	0
Special Naphthas	415	199	720	(S)	271	1,606
Lubricants	237	14	48	(S)	75	374
Waxes	29	5	5	0	3	41
Asphalt and Road Oil	91	0	22	0	0	113
Miscellaneous Products	586	29	1	(S)	1	616
Total Imports	66,273	18,350	61,826	1,411	11,251	159,111

1 Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

2 Includes crude oil imported for storage in the Strategic Petroleum Reserve.  
(S) = Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.

Table 17. Year-to-Date Imports of Crude Oil and Petroleum Products by PAD District, January - June 1984  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					
	I	II	III	IV	V	Total
Crude Oil (including lease condensate) <sup>1 2</sup>	152,633	95,550	320,800	5,939	38,235	613,157
Natural Gas Liquids						
Pentanes plus	8,309	27,870	3,544	3,118	3,319	46,160
Liquefied Petroleum Gases	5,636	0	724	666	510	7,537
Ethane	2,673	27,870	2,819	2,453	2,809	38,623
Propane	1	16,037	0	0	0	16,038
Normal Butane	1,601	7,448	1,276	1,253	467	12,045
Isobutane	643	2,631	981	720	1,405	6,380
	429	1,754	562	480	937	4,161
Other Liquids <sup>1</sup>						
Unfinished Oils	20,772	2,152	27,652	0	7,674	58,249
Motor Gasoline Blending Components	13,223	2,077	26,220	0	3,533	45,052
Aviation Gasoline Blending Components	7,548	75	1,432	0	4,141	13,197
	0	0	0	0	0	0
Finished Petroleum Products						
Finished Motor Gasoline	231,622	5,360	29,519	1,083	9,161	276,746
Finished Lead Motor Gasoline	45,728	667	3,792	340	3,702	54,228
Finished Unleaded Motor Gasoline	22,032	395	2,800	321	1,224	26,772
Finished Aviation Gasoline	23,696	992	992	18	2,477	27,455
Naphtha-Type Jet Fuel	270	0	0	2	7	279
Kerosene-Type Jet Fuel	1,862	0	0	0	8	3,536
Bonded Aircraft Fuel	8,475	0	1,665	0	364	8,839
Other	0	0	0	0	0	0
Kerosene	8,475	0	0	0	364	8,839
Distillate Fuel Oil	1,451	0	6	0	(s)	1,458
Bonded Ships Bunkers	43,792	1,383	956	647	853	47,631
Other	0	0	0	0	0	0
Residual Fuel Oil	43,792	1,383	956	647	853	47,631
Bonded Ships Bunkers	124,913	1,517	11,919	89	2,737	141,175
Other	0	0	0	0	0	0
Naphtha < 400 Deg. for Petro. Feed. Use	124,913	1,517	11,919	89	2,737	141,175
Other Oils > 400 Deg. for Petro. Feed. Use	696	91	4,283	0	0	5,079
Special Naphthas	1,970	1,284	5,121	3	1,023	9,401
Lubricants	1,262	70	168	1	421	1,922
Waxes	80	30	134	0	15	260
Asphalt and Road Oil	196	16	35	0	3	249
Miscellaneous Products	927	303	1,432	2	26	2,689
Total Imports	413,336	130,932	381,515	10,140	58,389	994,312

<sup>1</sup> Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

<sup>2</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.

(s) = Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 18. Imports of Crude Oil and Petroleum Products by Source and PAD District, June 1984  
(Thousand Barrels)

Source	Crude Oil 1	LPG	Unfin-ished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kero-sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod-ucts 2	Total Prod-ucts	Total Petro-leum	Total (Daily Average)
All PAD Districts														
Arab OPEC														
Algeria .....	5,269	180	0	0	0	0	0	707	1,186	218	984	3,255	8,523	284
Iraq .....	101	0	0	0	0	0	0	0	0	0	0	0	101	3
Kuwait .....	1,068	0	0	0	0	0	0	0	792	0	0	792	1,860	62
Saudi Arabia .....	11,962	165	217	0	0	0	0	0	0	0	0	0	12,344	411
United Arab Emirates .....	550	0	0	0	0	0	0	0	0	0	817	817	1,366	46
Subtotal Arab OPEC .....	18,949	345	217	0	0	0	0	707	1,978	218	1,780	5,245	24,195	806
Other OPEC														
Ecuador .....	1,073	0	0	0	0	0	0	0	411	0	0	411	1,483	49
Gabon .....	719	0	0	0	0	0	0	0	0	0	0	0	719	24
Indonesia .....	10,965	0	0	0	67	37	0	13	1,134	235	(s)	1,485	12,451	415
Nigeria .....	6,991	0	288	0	0	0	0	0	0	0	0	288	7,279	243
Venezuela .....	7,350	0	977	0	1,567	225	0	2,825	4,013	0	271	9,879	17,229	574
Subtotal Other OPEC .....	27,098	0	1,265	0	1,634	261	0	2,838	5,558	235	271	12,063	39,160	1,305
Other														
Angola .....	3,478	0	0	0	0	0	0	0	0	0	0	0	3,478	116
Australia .....	600	0	0	0	169	9	0	29	19	0	48	274	874	29
Bahamas .....	0	0	784	0	0	0	0	225	491	0	0	1,501	1,501	50
Brazil .....	0	0	0	0	851	0	0	0	1,895	37	(s)	2,784	2,784	93
Canada .....	8,214	3,994	233	0	433	8	1	972	623	252	243	6,760	14,974	499
Congo .....	1,060	0	0	0	0	0	0	0	167	0	0	167	1,227	41
Egypt .....	784	0	0	0	0	0	0	0	0	0	0	0	784	26
France .....	0	0	0	0	161	0	0	0	0	0	(s)	162	162	5
Malaysia .....	0	0	0	0	97	0	0	13	45	0	0	155	155	5
Mexico .....	19,532	369	907	873	(s)	29	0	147	6	(s)	88	2,418	21,950	732
Netherlands .....	1	0	0	0	506	0	0	746	0	36	46	1,333	1,334	44
Netherlands Antilles .....	0	0	1,085	219	562	188	0	367	4,613	0	0	7,034	7,034	234
Norway .....	4,516	0	0	0	0	0	0	0	0	0	0	0	4,516	151
Oman .....	497	0	0	0	0	0	0	0	0	0	0	0	497	17
People's Republic of China .....	630	0	0	606	267	0	0	0	0	0	3	876	1,506	50
Peru .....	222	0	0	0	0	0	0	0	456	0	0	456	678	23
Puerto Rico .....	0	0	215	0	722	0	0	0	0	379	278	1,594	1,594	53
Romania .....	0	0	0	303	395	0	0	0	389	0	0	1,087	1,087	36
Spain .....	0	0	0	0	240	0	0	0	0	0	0	240	240	8
Trinidad and Tobago .....	3,106	0	0	0	0	0	0	0	0	0	0	0	3,106	104
United Kingdom .....	9,154	30	0	0	368	0	0	0	0	0	(s)	398	9,552	318
Virgin Islands .....	0	0	1,297	0	1,038	787	273	1,654	2,890	104	0	8,042	8,042	268
Zaire .....	1,169	0	0	0	0	0	0	0	0	0	0	0	1,169	39
Other Western Hemisphere														
Hemisphere .....	149	0	0	0	0	0	0	0	622	54	(s)	676	825	28
Other Eastern Hemisphere .....	3,155	(s)	872	183	722	44	0	288	529	292	604	3,534	6,689	223
Subtotal Other .....	56,264	4,393	5,393	2,185	6,530	1,066	273	4,440	12,747	1,153	1,312	39,492	95,756	3,192
Total Imports .....	102,311	4,738	6,875	2,185	8,165	1,327	273	7,985	20,283	1,806	3,364	56,800	159,111	5,304
PAD District 1														
Arab OPEC														
Algeria .....	1,313	180	0	0	0	0	0	707	1,186	218	0	2,291	3,604	120
Saudi Arabia .....	2,694	165	217	0	0	0	0	0	0	0	0	382	3,076	103
United Arab Emirates .....	4,000	0	0	0	0	0	0	0	0	0	817	817	817	27
Subtotal Arab OPEC .....	8,007	345	217	0	0	0	0	707	1,186	218	0	3,076	7,497	250

Table 18. Imports of Crude Oil and Petroleum Products by Source and PAD District, June 1984  
(Thousand Barrels) (continued)

Source	Crude Oil 1	LPG	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Distill. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Products 2	Total Products	Total Petroleum	Total (Daily Average)
PAD District I														
<b>Other OPEC</b>														
Ecuador .....	0	0	0	0	0	0	0	0	411	0	0	411	411	14
Gabon .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indonesia .....	931	0	0	0	0	0	0	0	523	0	0	523	1,454	48
Nigeria .....	2,886	0	0	0	0	0	0	0	0	0	0	0	2,886	96
Venezuela .....	2,141	0	0	0	1,340	225	0	2,825	3,769	0	271	8,430	10,571	352
Subtotal Other OPEC .....	5,958	0	0	0	1,340	225	0	2,825	4,702	0	271	9,363	15,321	511
<b>Other</b>														
Angola .....	2,784	0	0	0	0	0	0	0	0	0	0	0	2,784	93
Australia .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bahamas .....	0	0	0	0	0	0	0	225	491	0	0	716	716	24
Brazil .....	0	0	0	0	637	0	0	0	1,895	0	(s)	2,532	2,532	84
Canada .....	884	236	5	0	296	0	1	403	481	16	77	1,515	2,399	80
Congo .....	567	0	0	0	0	0	0	0	167	0	0	167	735	24
Egypt .....	784	0	0	0	0	0	0	0	0	0	0	0	784	26
France .....	0	0	0	0	161	0	0	0	0	0	(s)	161	161	5
Mexico .....	2,833	0	0	873	(s)	0	0	145	0	0	0	1,018	3,851	128
Netherlands .....	1	0	0	0	506	0	0	746	0	36	(s)	1,287	1,288	43
Netherlands Antilles .....	0	0	603	219	562	188	0	367	4,613	0	0	6,552	6,552	218
Norway .....	2,533	0	0	0	0	0	0	0	0	0	0	0	2,533	84
Oman .....	497	0	0	0	0	0	0	0	0	0	0	0	497	17
People's Republic of China .....	630	0	0	0	0	0	0	0	0	0	0	0	630	21
Peru .....	0	0	0	0	0	0	0	0	456	0	0	456	456	15
Puerto Rico .....	0	0	215	0	722	0	0	0	0	146	228	1,311	1,311	44
Romania .....	0	0	0	303	395	0	0	0	399	0	0	1,087	1,087	36
Spain .....	0	0	0	0	240	0	0	0	0	0	0	240	240	8
Trinidad and Tobago .....	906	0	0	0	0	0	0	0	0	0	0	0	906	30
United Kingdom .....	3,052	29	0	0	368	0	0	0	0	0	(s)	397	3,449	115
Virgin Islands .....	0	0	774	0	1,038	787	273	1,654	2,854	0	0	7,378	7,378	246
Zaire .....	199	0	0	0	0	0	0	0	0	0	0	0	199	7
Other Western Hemisphere .....	0	0	0	0	0	0	0	0	622	0	0	622	622	21
Other Eastern Hemisphere .....	534	0	0	0	613	0	0	250	366	0	582	1,811	2,345	78
Subtotal Other .....	16,203	265	1,597	1,395	5,536	975	273	3,790	12,335	198	889	27,253	43,456	1,449
<b>Total Imports</b> .....	<b>26,167</b>	<b>610</b>	<b>1,814</b>	<b>1,395</b>	<b>5,876</b>	<b>1,200</b>	<b>273</b>	<b>7,322</b>	<b>18,223</b>	<b>415</b>	<b>1,976</b>	<b>40,106</b>	<b>66,273</b>	<b>2,209</b>
PAD District II														
<b>Arab OPEC</b>														
Algeria .....	486	0	0	0	0	0	0	0	0	0	0	0	486	16
Subtotal Arab OPEC .....	486	0	0	0	0	0	0	0	0	0	0	0	486	16
<b>Other OPEC</b>														
Ecuador .....	372	0	0	0	0	0	0	0	0	0	0	0	372	12
Nigeria .....	1,363	0	0	0	0	0	0	0	0	0	0	0	1,363	45
Subtotal Other OPEC .....	1,734	0	0	0	0	0	0	0	0	0	0	0	1,734	58

See footnotes at end of table.



Table 18. Imports of Crude Oil and Petroleum Products by Source and PAD District, June 1984  
(Thousand Barrels) (continued)

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
PAD District II														
Other														
Australia .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Canada .....	6,010	3,158	214	0	82	0	0	438	133	199	52	4,276	10,285	343
Congo .....	492	0	0	0	0	0	0	0	0	0	0	0	492	16
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Mexico .....	4,304	0	0	0	0	0	0	0	0	0	0	0	4,304	143
Netherlands .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peru .....	222	0	0	0	0	0	0	0	0	0	0	0	0	0
Trinidad and Tobago .....	824	0	0	0	0	0	0	0	0	0	0	0	824	7
United Kingdom .....	0	1	0	0	0	0	0	0	0	0	(s)	1	1	27
Other Western .....	0	0	0	0	0	0	0	0	0	0	0	0	0	(s)
Hemisphere .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Eastern Hemisphere .....	0	(s)	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Subtotal Other .....	11,852	3,160	214	0	82	0	0	438	133	199	52	4,277	16,129	538
Total Imports .....	14,073	3,160	214	0	82	0	0	438	133	199	52	4,277	18,350	612
PAD District III														
Arab OPEC														
Algeria .....	3,470	0	0	0	0	0	0	0	0	0	964	964	4,433	148
Iraq .....	101	0	0	0	0	0	0	0	0	0	0	0	101	3
Kuwait .....	1,068	0	0	0	0	0	0	0	792	0	0	792	1,860	62
Saudi Arabia .....	9,268	0	0	0	0	0	0	0	0	0	0	0	9,268	309
United Arab Emirates .....	550	0	0	0	0	0	0	0	0	0	0	0	550	18
Subtotal Arab OPEC .....	14,457	0	0	0	0	0	0	0	792	0	964	1,756	16,212	540
Other OPEC														
Ecuador .....	701	0	0	0	0	0	0	0	0	0	0	0	701	23
Gabon .....	719	0	0	0	0	0	0	0	0	0	0	0	719	24
Indonesia .....	2,890	0	0	0	0	0	0	0	406	0	0	406	3,297	110
Nigeria .....	2,743	0	288	0	0	0	0	0	0	0	0	0	288	3,031
Venezuela .....	4,994	0	977	0	227	0	0	0	245	0	0	1,449	6,444	215
Subtotal Other OPEC .....	12,047	0	1,265	0	227	0	0	0	651	0	0	2,144	14,191	473
Other														
Angola .....	694	0	0	0	0	0	0	0	0	0	0	0	694	23
Australia .....	0	0	0	0	0	0	0	0	0	0	48	48	48	2
Bahamas .....	0	0	784	0	0	0	0	0	0	0	0	784	784	26
Brazil .....	0	0	0	0	214	0	0	0	0	37	0	252	252	8
Canada .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Congo .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Malaysia .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico .....	12,394	366	907	0	0	29	0	1	0	(s)	86	1,389	13,783	459
Netherlands .....	0	0	482	0	0	0	0	0	0	0	46	46	46	2
Netherlands Antilles .....	0	0	0	0	0	0	0	0	0	0	0	482	482	16
Norway .....	1,984	0	0	0	0	0	0	0	0	0	0	0	1,984	66
Puerto Rico .....	0	0	0	0	0	0	0	0	0	233	0	233	233	8
Trinidad and Tobago .....	1,376	0	0	0	0	0	0	0	0	0	0	0	1,376	46
United Kingdom .....	6,102	0	0	0	0	0	0	0	0	0	(s)	(s)	6,102	203

See footnotes at end of table.

Table 18. Imports of Crude Oil and Petroleum Products by Source and PAD District, June 1984  
(Thousand Barrels) (continued)

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
PAD District III														
Other														
Virgin Islands .....	0	0	523	0	0	0	0	0	37	104	0	664	664	22
Zaire .....	970	0	0	0	0	0	0	0	0	0	0	0	970	32
Other Western Hemisphere .....	149	0	0	0	0	0	0	0	0	54	(s)	54	203	7
Other Eastern Hemisphere .....	2,621	0	872	18	0	0	0	0	0	292	(s)	1,182	3,803	127
Subtotal Other .....	26,290	366	3,567	18	214	29	0	1	37	720	180	5,133	31,423	1,047
Total Imports .....	52,794	366	4,833	18	441	29	0	1	1,480	720	1,144	9,032	61,826	2,061
PAD District IV														
Other														
Canada .....	944	208	0	0	47	0	0	97	2	(s)	113	468	1,411	47
France .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Eastern Hemisphere .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal Other .....	944	208	0	0	47	0	0	97	2	(s)	113	468	1,411	47
Total Imports .....	944	208	0	0	47	0	0	97	2	(s)	113	468	1,411	47
PAD District V														
Arab OPEC														
Algeria .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United Arab Emirates .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal Arab OPEC .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other OPEC														
Ecuador .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indonesia .....	7,144	0	0	0	67	37	0	13	205	235	(s)	556	7,700	257
Venezuela .....	214	0	0	0	0	0	0	0	0	0	0	0	214	7
Subtotal Other OPEC .....	7,358	0	0	0	67	37	0	13	205	235	(s)	556	7,914	264
Other														
Australia .....	600	0	0	0	169	9	0	29	19	0	0	227	826	28
Brazil .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Canada .....	376	392	15	0	9	8	0	34	7	36	1	502	878	29
France .....	0	0	0	0	0	0	0	0	0	0	(s)	0	(s)	(s)
Malaysia .....	0	0	0	0	97	0	0	13	45	0	0	155	155	5
Mexico .....	0	3	0	0	0	0	0	(s)	6	0	3	11	11	(s)
People's Republic of China .....	0	0	0	606	267	0	0	0	0	0	0	876	876	29
Puerto Rico .....	0	0	0	0	0	0	0	0	0	0	0	50	50	2
United Kingdom .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Eastern Hemisphere .....	0	(s)	0	185	109	44	0	38	163	0	22	541	541	18
Subtotal Other .....	976	394	15	771	651	62	0	114	240	36	78	2,362	3,337	111
Total Imports .....	8,334	394	15	771	718	98	0	126	445	271	79	2,918	11,251	375

1 Includes crude oil imported for storage in the Strategic Petroleum Reserve.

2 Includes aviation gasoline, waxes, asphalt, lubricants, pentanes plus, naphthas less than 400 degrees F, other oils greater than 400 degrees F and other petroleum products.

(s) = Less than 500 barrels or less than 500 barrels of components derived from one source.  
Note: Total of components derived from one source.  
Source: See

Table 19. Year-to-Date Imports Of Crude Oil and Petroleum Products by Source and PAD District, January - June 1984  
(Thousand Barrels)

Source	Crude Oil 1	LPG	Unfinished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Products 2	Total Products	Total Petroleum	Total (Daily Average)
All PAD Districts														
<b>Arab OPEC</b>														
Algeria	36,383	180	253	0	434	327	0	2,941	11,634	2,046	3,226	21,040	57,423	316
Iraq	102	0	0	0	0	0	0	0	0	0	0	0	102	1
Kuwait	3,904	0	0	0	0	0	0	0	3,685	0	0	3,685	7,589	42
Saudi Arabia	62,777	503	1,119	0	0	0	0	0	1,013	0	(s)	2,635	65,412	359
United Arab Emirates	14,757	0	795	546	0	221	0	0	1,745	0	1,586	4,894	19,650	108
Subtotal Arab OPEC	117,923	683	2,167	546	434	548	0	2,941	18,077	2,046	4,812	32,254	150,176	825
<b>Other OPEC</b>														
Ecuador	9,040	0	0	0	0	0	0	0	1,392	0	0	1,392	10,432	57
Gabon	8,535	0	0	0	0	0	0	0	246	60	0	306	8,841	49
Indonesia	50,152	1,356	1,787	0	913	128	0	266	3,973	467	72	8,962	59,114	325
Iran	2,071	0	0	0	0	0	0	0	0	0	0	0	2,071	11
Nigeria	45,811	0	1,582	0	0	0	0	53	90	0	0	1,725	47,536	261
Venezuela	45,947	0	2,788	669	10,115	2,206	0	10,044	23,473	68	506	49,869	95,815	526
Subtotal Other OPEC	161,556	1,356	6,156	669	11,029	2,335	0	10,363	29,175	595	578	62,255	223,811	1,230
<b>Other</b>														
Angola	15,867	0	0	0	0	0	0	0	568	0	0	568	16,435	90
Australia	2,789	96	0	0	311	36	0	67	832	0	135	1,477	4,266	23
Bahamas	0	0	5,538	0	0	659	0	3,535	4,749	0	2,111	16,661	16,661	92
Bolivia	260	0	0	0	0	0	0	0	0	0	0	0	260	1
Brazil	2	0	0	0	4,231	0	0	0	5,079	202	24	9,537	9,538	52
Brunei	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Canada	62,547	34,544	1,826	75	3,251	8	32	6,532	4,794	1,719	2,350	55,141	117,688	647
Congo	5,427	0	0	0	0	0	0	0	910	0	0	910	6,337	35
Egypt	1,842	0	(s)	0	161	0	0	0	0	(s)	11	173	1,842	10
France	0	(s)	0	0	0	0	0	0	119	0	0	119	119	1
Ghana	0	0	0	0	0	0	0	0	1,749	0	0	1,749	1,749	10
Liberia	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Malaysia	0	0	125	0	158	7	0	20	728	1	219	13,089	134,122	737
Mexico	121,033	1,472	5,383	3,511	439	244	0	1,093	728	331	513	13,283	14,327	79
Netherlands	1,045	(s)	0	349	4,734	195	0	6,171	988	0	104	41,372	41,372	227
Netherlands Antilles	0	28	6,983	426	5,831	606	0	2,197	25,198	0	0	817	20,028	110
Norway	19,206	(s)	0	0	0	451	0	366	0	0	0	1,239	2,231	12
Oman	993	0	0	0	0	0	0	0	1,239	0	0	1,239	2,231	36
People's Republic of China	1,665	0	321	3,704	599	0	0	0	4,322	347	3	4,974	6,639	27
Peru	224	0	373	0	0	0	0	0	0	0	0	0	0	45
Puerto Rico	0	0	1,125	0	2,470	253	0	1,011	0	2,212	1,202	8,274	8,274	45
Romania	0	0	252	2,513	917	0	0	0	389	183	2,670	7,126	7,126	39
Spain	0	0	218	0	967	1,016	0	123	782	0	18	3,123	3,123	17
Trinidad and Tobago	13,534	0	13	0	0	0	0	0	829	7	16	665	14,400	79
Tunisia	2	0	0	0	0	0	0	0	0	0	0	0	0	(s)
United Kingdom	59,380	317	737	370	2,194	325	0	163	655	156	709	5,626	65,005	357
Virgin Islands	0	0	6,788	0	9,518	4,219	0	10,628	25,088	255	235	58,022	58,022	319
Zaire	5,526	0	0	0	0	0	0	0	0	0	0	0	0	30
Other Western Hemisphere	572	127	1,699	0	0	0	6	43	5,949	203	144	8,170	8,742	48

See footnotes at end of table.

Table 19. Year-to-Date Imports Of Crude Oil and Petroleum Products by Source and PAD District, January - June 1984  
(continued)

Source	Crude Oil 1	LPG	Unfin-ished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kero-sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod-ucts 2	Total Prod-ucts	Total Petro-leum	Total (Daily Average)
All PAD Districts														
Other														
Other Eastern Hemisphere	21,764	2	5,346	1,033	6,972	1,473	60	2,379	8,861	1,145	1,950	29,230	50,994	280
Subtotal Other	333,679	36,585	36,729	11,982	42,765	9,492	1,458	34,327	93,923	6,761	12,625	286,646	620,325	3,408
Total Imports	613,157	38,623	45,052	13,197	54,228	12,375	1,458	47,631	141,175	9,401	18,015	381,155	994,312	5,463
PAD District I														
Arab OPEC														
Algeria	9,165	180	0	0	434	327	0	2,890	11,634	218	743	16,426	25,591	141
Kuwait	253	0	0	0	0	0	0	0	0	0	0	0	253	1
Saudi Arabia	12,039	503	867	0	0	0	0	0	0	0	(s)	1,370	13,409	74
United Arab Emirates	436	0	0	546	0	0	0	0	434	0	1,338	2,318	2,754	15
Subtotal Arab OPEC	21,893	683	867	546	434	327	0	2,890	12,068	218	2,081	20,114	42,006	231
Other OPEC														
Ecuador	302	0	0	0	0	0	0	0	1,392	0	0	1,392	1,694	9
Gabon	1,575	0	0	0	0	0	0	0	246	60	0	306	1,881	10
Indonesia	13,694	0	228	0	0	0	0	0	1,014	0	0	1,242	14,936	82
Nigeria	14,455	0	0	0	0	0	0	50	90	0	0	140	14,595	80
Venezuela	11,879	0	0	0	8,877	2,206	0	10,044	22,597	0	339	44,064	55,942	307
Subtotal Other OPEC	41,904	0	228	0	8,877	2,206	0	10,094	25,340	60	339	47,144	89,049	489
Other														
Angola	9,574	0	0	0	0	0	0	0	568	0	0	568	10,142	56
Australia	0	0	0	0	0	0	0	0	746	0	0	746	746	4
Bahamas	0	0	481	0	0	659	69	3,256	4,749	0	180	9,394	9,394	52
Brazil	2	0	0	0	3,076	0	0	0	4,816	0	(s)	7,892	7,894	43
Canada	6,460	1,546	36	0	1,370	0	31	4,388	3,181	116	1,060	11,729	18,189	100
Congo	2,432	0	0	0	0	0	0	0	910	0	0	910	3,342	18
Egypt	1,168	0	0	0	0	0	0	0	0	0	0	0	1,168	6
France	0	(s)	0	0	161	0	0	0	0	(s)	1	162	162	1
Ghana	0	0	0	0	0	0	0	0	119	0	0	119	119	1
Liberia	0	0	0	0	0	0	0	0	1,749	0	0	1,749	1,749	10
Mexico	15,078	0	0	3,216	(s)	215	0	885	328	0	33	4,678	19,756	109
Netherlands	1	(s)	0	190	4,734	196	0	6,171	988	36	1	12,316	12,317	68
Netherlands Antilles	0	0	0	426	4,753	567	0	1,838	25,006	0	7	38,581	38,581	212
Norway	13,053	0	5,984	0	0	89	0	366	0	0	0	456	13,508	74
Oman	993	0	0	0	0	0	0	0	595	0	0	595	1,578	9
People's Republic of China	1,305	0	0	0	0	0	0	0	0	0	(s)	(s)	1,305	7
Peru	2	0	1,125	0	0	0	0	0	4,060	0	0	4,060	4,062	22
Puerto Rico	0	0	0	0	2,470	253	0	772	0	895	1,152	6,668	6,668	37
Romania	0	0	252	2,291	917	825	0	0	389	183	2,870	6,904	6,904	38
Spain	0	0	0	0	967	0	0	123	782	0	(s)	2,697	2,697	15
Trinidad and Tobago	2,290	0	13	0	0	0	0	0	829	7	0	849	3,139	17
Tunisia	2	0	0	0	0	0	0	0	0	0	0	0	0	(s)
United Kingdom	29,540	316	471	79	2,067	154	0	163	655	(s)	283	4,186	33,726	185

See footnotes at end of table.

Table 19. Year-to-Date Imports Of Crude Oil and Petroleum Products by Source and PAD District, January - June 1984  
(Thousand Barrels)  
(continued)

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
PAD District I														
Other														
Virgin Islands .....	0		3,150	0	9,518	4,219	1,291	10,628	24,752	0	0	53,559	53,559	294
Zaire .....	2,768		0	0	0	0	0	0	0	0	0	0	2,768	15
Other Western Hemisphere .....	0	127	611	0	0	0	0	32	5,949	0	8	6,726	6,726	37
Other Eastern Hemisphere .....	4,169	2	4	800	6,382	627	60	2,185	6,346	455	1,053	17,914	22,083	121
Subtotal Other .....	88,837	1,990	12,129	7,002	36,417	7,804	1,451	30,808	87,505	1,692	6,648	193,445	282,282	1,551
Total Imports .....	152,633	2,673	13,223	7,548	45,728	10,337	1,451	43,792	124,913	1,970	9,068	260,703	413,336	2,271
PAD District II														
Arab OPEC														
Algeria .....	4,739	0	0	0	0	0	0	0	0	0	0	0	4,739	26
Saudi Arabia .....	2,092	0	0	0	0	0	0	0	0	0	0	0	2,092	11
United Arab Emirates .....	1,075	0	0	0	0	0	0	0	0	0	0	0	1,075	6
Subtotal Arab OPEC .....	7,906	0	0	0	0	0	0	0	0	0	0	0	7,906	43
Other OPEC														
Ecuador .....	1,430	0	0	0	0	0	0	0	0	0	0	0	1,430	8
Indonesia .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iran .....	1,040	0	0	0	0	0	0	0	0	0	0	0	1,040	6
Nigeria .....	4,832	0	203	0	0	0	0	0	0	0	0	203	5,035	28
Venezuela .....	417	0	0	0	0	0	0	0	0	0	0	0	417	2
Subtotal Other OPEC .....	7,719	0	203	0	0	0	0	0	0	0	0	203	7,922	44
Other														
Australia .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bahamas .....	0	0	218	0	0	0	0	0	0	0	0	218	218	1
Canada .....	44,859	27,869	1,655	75	667	0	0	1,383	1,517	1,284	507	34,956	79,815	439
Congo .....	1,427	0	0	0	0	0	0	0	0	0	0	0	1,427	8
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Mexico .....	24,613	0	0	0	0	0	0	0	0	0	0	0	24,613	135
Netherlands .....	1,044	0	0	0	0	0	0	0	0	0	0	0	1,044	6
Norway .....	519	0	0	0	0	0	0	0	0	0	0	0	519	3
Peru .....	222	0	0	0	0	0	0	0	0	0	0	0	222	1
Trinidad and Tobago .....	5,107	0	0	0	0	0	0	0	0	0	0	0	5,107	28
United Kingdom .....	1,727	1	0	0	0	0	0	0	0	0	1	2	1,730	10
Other Western Hemisphere .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Eastern Hemisphere .....	407	(s)	0	0	0	0	0	0	0	0	2	2	409	2
Subtotal Other .....	79,924	27,870	1,873	75	667	0	0	1,383	1,517	1,284	510	35,179	115,103	632
Total Imports .....	95,550	27,870	2,077	75	667	0	0	1,383	1,517	1,284	510	35,382	130,932	719

See footnotes at end of table.

Table 19. Year-to-Date Imports Of Crude Oil and Petroleum Products by Source and PAD District, January - June 1984  
(Thousand Barrels)  
(continued)

Source	Crude Oil 1	LPG	Unfin-ished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kero-sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod-ucts 2	Total Prod-ucts	Total Petro-leum	Total (Daily Average)
PAD District III														
Arab OPEC														
Algeria .....	21,545	0	0	0	0	0	0	50	0	1,828	2,483	4,361	25,906	142
Iraq .....	102	0	0	0	0	0	0	0	0	0	0	0	102	1
Kuwait .....	3,652	0	0	0	0	0	0	0	3,685	0	0	3,685	7,336	40
Saudi Arabia .....	48,646	0	0	0	0	0	0	0	1,013	0	0	1,013	49,659	273
United Arab Emirates .....	13,246	0	527	0	0	221	0	0	1,311	0	249	2,307	15,553	85
Subtotal Arab OPEC .....	87,190	0	527	0	0	221	0	50	6,010	1,828	2,732	11,366	98,557	542
Other OPEC														
Ecuador .....	6,948	0	0	0	0	0	0	0	0	0	0	0	6,948	38
Gabon .....	6,960	0	0	0	0	0	0	0	0	0	0	0	6,960	38
Indonesia .....	9,409	1,356	0	0	0	0	0	0	1,719	0	71	3,146	12,556	69
Iran .....	1,032	0	0	0	0	0	0	0	0	0	0	0	1,032	6
Nigeria .....	26,524	0	1,379	0	0	0	0	3	0	0	0	1,382	27,906	153
Venezuela .....	33,238	0	2,788	669	992	0	0	0	876	68	167	5,559	38,797	213
Subtotal Other OPEC .....	84,112	1,356	4,166	669	992	0	0	3	2,595	68	238	10,087	94,198	518
Other														
Angola .....	6,294	0	0	0	0	0	0	0	0	0	0	0	6,294	35
Australia .....	2	0	0	0	0	0	0	0	0	0	135	135	136	1
Bahamas .....	0	0	4,839	0	0	0	0	279	0	0	1,931	7,049	7,049	39
Bolivia .....	260	0	0	0	0	0	0	0	0	0	0	0	260	1
Brazil .....	0	0	0	0	1,156	0	0	0	263	202	23	1,645	1,645	9
Canada .....	1	0	0	0	0	0	0	0	0	186	71	257	258	1
Congo .....	1,567	0	0	0	0	0	0	0	0	0	0	0	1,567	9
Egypt .....	674	0	0	0	0	0	0	0	0	0	0	0	674	4
France .....	0	0	(s)	0	0	0	(s)	0	0	0	10	10	10	(s)
Malaysia .....	0	0	125	0	0	0	0	0	0	0	0	125	125	1
Mexico .....	81,343	1,436	5,383	294	439	29	0	198	360	1	169	8,309	89,652	493
Netherlands .....	0	0	0	160	0	0	0	0	0	295	512	967	967	5
Netherlands Antilles .....	0	28	998	0	1,078	0	0	358	0	0	30	2,492	2,492	14
Norway .....	5,635	(s)	0	0	0	361	0	0	654	0	0	654	5,996	33
Oman .....	0	0	0	0	0	0	0	0	0	0	0	0	654	4
People's Republic of China .....	360	0	0	0	0	0	0	0	0	0	0	0	360	2
Peru .....	0	0	373	0	0	0	0	0	262	0	0	634	634	3
Puerto Rico .....	0	0	0	0	0	0	0	0	0	1,317	0	1,317	1,317	7
Romania .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spain .....	0	0	218	0	0	190	0	0	0	0	18	427	427	2
Trinidad and Tobago .....	6,137	0	0	0	0	0	0	0	0	0	16	16	6,153	34
United Kingdom .....	28,112	0	266	291	127	171	0	(s)	0	156	426	1,437	29,550	162
Virgin Islands .....	0	0	3,638	0	0	0	0	0	335	255	235	4,464	4,464	25
Zaire .....	2,758	0	0	0	0	0	0	0	0	0	0	0	2,758	15
Other Western Hemisphere .....	572	0	1,098	0	0	0	6	12	0	203	136	1,444	2,017	11
Other Eastern Hemisphere .....	15,784	0	4,598	18	0	693	0	56	1,441	610	103	7,520	23,303	128
Subtotal Other .....	149,499	1,463	21,527	764	2,800	1,445	6	903	3,314	3,225	3,815	39,262	189,760	1,037
Total Imports .....	320,800	2,819	26,220	1,432	3,792	1,665	6	956	11,919	5,121	6,785	60,715	381,515	2,056

See footnotes at end of table.

Table 19. Year-to-Date Imports Of Crude Oil and Petroleum Products by Source and PAD District, January - June 1984  
(Thousand Barrels)  
(continued)

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
PAD District IV														
Other														
Canada .....	5,939	2,453	0	0	340	0	0	647	89	3	670	4,201	10,140	56
France .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Eastern Hemisphere .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal Other .....	5,939	2,453	0	0	340	0	0	647	89	3	670	4,201	10,140	56
Total Imports .....	5,939	2,453	0	0	340	0	0	647	89	3	670	4,201	10,140	56
PAD District V														
Arab OPEC														
Algeria .....	934	0	253	0	0	0	0	0	0	0	0	253	1,187	7
Saudi Arabia .....	0	0	252	0	0	0	0	0	0	0	0	252	252	1
United Arab Emirates .....	0	0	269	0	0	0	0	0	0	0	0	269	269	1
Subtotal Arab OPEC .....	934	0	774	0	0	0	0	0	0	0	0	774	1,707	9
Other OPEC														
Ecuador .....	360	0	0	0	0	0	0	0	0	0	0	0	360	2
Indonesia .....	27,048	0	1,559	0	913	128	0	266	1,239	467	1	4,574	31,623	174
Venezuela .....	413	0	0	0	246	0	0	0	0	0	0	246	659	4
Subtotal Other OPEC .....	27,821	0	1,559	0	1,159	128	0	266	1,239	467	1	4,821	32,642	179
Other														
Australia .....	2,788	96	0	0	311	36	0	67	87	0	(s)	596	3,384	19
Brazil .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brunei .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Canada .....	5,288	2,677	135	0	885	8	(s)	114	7	130	42	3,998	9,287	51
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Malaysia .....	0	0	0	0	158	7	0	20	99	0	0	284	284	2
Mexico .....	0	36	0	0	0	0	0	10	40	0	17	102	102	1
Netherlands .....	0	(s)	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)
Netherlands Antilles .....	0	0	0	0	0	40	0	0	192	0	67	299	299	2
Norway .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
People's Republic of China .....	0	0	321	3,704	599	0	0	0	0	347	3	4,974	4,974	27
Puerto Rico .....	0	0	0	0	0	0	0	239	0	0	50	288	288	2
Romania .....	0	0	0	222	0	0	0	0	0	0	0	222	222	1
United Kingdom .....	0	0	0	0	0	0	0	0	0	(s)	0	(s)	(s)	(s)
Other Eastern Hemisphere .....	1,404	(s)	743	215	589	153	0	137	1,073	81	802	3,795	5,199	29
Subtotal Other .....	9,481	2,809	1,200	4,141	2,542	244	(s)	587	1,498	557	982	14,560	24,040	132
Total Imports .....	38,235	2,809	3,533	4,141	3,702	372	(s)	853	2,737	1,023	983	20,154	58,389	321

1 Includes crude oil imported for storage in the Strategic Petroleum Reserve.

2 Includes aviation gasoline, waxes, asphalt, lubricants, pentanes plus, naphthas less than 400 degrees F, other oils greater than 400 degrees F and miscellaneous products.

(S) = Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 20. Exports of Crude Oil and Petroleum Products by PAD District, June 1984  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					
	I	II	III	IV	V	Total
Crude Oil (including lease condensate) <sup>1</sup>	0	428	0	0	6,237	6,665
Natural Gas Liquids	16	525	931	0	186	1,657
Pentanes Plus	0	79	0	0	0	79
Liquefied Petroleum Gases	16	446	931	0	186	1,579
Ethane	(s)	157	0	0	0	157
Propane	8	132	796	0	74	1,010
Normal Butane	8	79	135	0	112	333
Isobutane	0	79	0	0	0	79
Finished Motor Gasoline	58	0	76	0	381	514
Naphtha-Type Jet Fuel	0	0	81	0	0	81
Kerosene-Type Jet Fuel	0	0	155	0	36	191
Kerosene	4	0	1	0	(s)	6
Distillate Fuel Oil	2	0	472	0	1,114	1,589
Residual Fuel Oil	0	0	1,106	0	4,169	5,275
Naphtha < 400 Deg. for Petrochem. Feedstock	49	8	114	1	39	211
Other Oils > 400 Deg. for Petrochem. Feedstock	1	42	740	0	59	841
Special Naphthas	6	3	39	0	243	291
Lubricants	152	31	216	1	76	476
Waxes	4	(s)	29	0	4	37
Petroleum Coke	221	457	4,170	0	3,214	8,062
Asphalt	2	1	(s)	1	(s)	4
Miscellaneous Products	14	2	4	(s)	3	23
Total Product Exports	527	1,069	8,134	3	9,526	19,259
Total Exports	527	1,497	8,134	3	15,763	25,924

<sup>1</sup> Exports of crude oil are prohibited by law. However, some crude oil is exchanged with Canada on a barrel for barrel basis, and crude oil is shipped to U.S. Territories (especially Puerto Rico and the Virgin Islands) to be refined there. The Statistical Tracking Systems count these exchanges and shipments as imports and exports.  
(s) = Less than 500 barrels or less than 500 barrels per day.  
Note: Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.



Table 21. Year-to-Date Exports Of Crude Oil And Petroleum Products By PAD District, January - June 1984  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					
	I	II	III	IV	V	Total
Crude Oil (including lease condensate) <sup>1</sup>	0	2,624	(s)	0	33,369	35,993
Natural Gas Liquids	213	3,305	4,460	(s)	1,037	9,016
Pentanes Plus	0	493	0	0	0	493
Liquefied Petroleum Gases	213	2,812	4,460	(s)	1,037	8,523
Ethane	(s)	986	(s)	0	0	986
Propane	92	831	3,536	(s)	416	4,876
Normal Butane	121	502	924	(s)	621	2,168
Isobutane	0	493	0	0	0	493
Finished Motor Gasoline	131	4	292	0	464	891
Naphtha-Type Jet Fuel	(s)	0	175	0	0	175
Kerosene-Type Jet Fuel	176	139	156	0	299	769
Kerosene	14	0	2	0	(s)	17
Distillate Fuel Oil	417	56	2,335	(s)	5,725	8,533
Residual Fuel Oil	433	0	10,798	0	17,681	28,913
Naphtha < 400 Deg. for Petrochem. Feedstock	357	53	726	6	150	1,292
Other Oils > 400 Deg. for Petrochem. Feedstock	2	131	2,627	0	263	3,022
Special Naphthas	40	67	190	3	247	546
Lubricants	752	177	1,878	7	277	3,092
Waxes	28	3	177	0	22	230
Petroleum Coke	1,356	1,183	20,606	4	14,213	37,362
Asphalt	14	12	12	3	10	50
Miscellaneous Products	91	11	60	(s)	18	180
Total Product Exports	4,023	5,139	44,495	23	40,407	94,087
Total Exports	4,023	7,763	44,495	23	73,776	130,080

<sup>1</sup> Exports of crude oil are prohibited by law. However, some crude oil is exchanged with Canada on a barrel for barrel basis, and crude oil is shipped to U.S. Territories (especially Puerto Rico and the Virgin Islands) to be refined there. The Statistical Tracking Systems count these exchanges and shipments as imports and exports.

(S) = Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 22. Exports of Crude Oil and Petroleum Products by Destination, June 1984  
(Thousand Barrels)

Destination	Crude Oil 1	LPG	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubri-cants	Waxes	Petro-leum Coke	Asphalt	Other2	Total	Total (Daily Average)
Argentina	0	0	0	155	0	0	0	14	(s)	(s)	0	159	329	11
Australia	0	3	(s)	0	0	0	0	14	(s)	126	(s)	29	177	6
Bahamas	0	0	1	0	0	0	0	2	0	0	0	(s)	3	(s)
Bahrain	0	0	0	0	0	0	(s)	(s)	0	0	0	(s)	(s)	(s)
Belgium & Luxembourg	0	1	0	0	0	0	2	1	(s)	792	(s)	3	796	27
Brazil	0	0	0	0	0	0	(s)	1	(s)	0	0	3	3	(s)
Cameroon	0	0	0	0	0	0	0	(s)	0	0	0	(s)	(s)	(s)
Canada	428	447	57	(s)	15	19	6	74	2	624	2	152	1,827	61
Chile	0	0	46	17	112	31	0	13	(s)	(s)	(s)	(s)	219	7
China (Taiwan)	0	(s)	0	0	140	1,805	(s)	10	(s)	(s)	(s)	2	1,757	59
Colombia	0	0	0	0	0	0	0	6	13	0	0	2	22	1
Costa Rica	0	0	0	0	0	0	3	4	(s)	22	(s)	1	30	1
Denmark	0	0	0	0	0	0	0	(s)	(s)	0	0	(s)	1	(s)
Dominican Republic	0	24	0	0	0	0	0	2	(s)	0	0	(s)	27	1
Ecuador	0	50	0	0	0	0	0	1	(s)	0	(s)	(s)	51	2
Egypt	0	0	0	0	0	0	0	5	(s)	0	0	(s)	5	(s)
El Salvador	0	1	0	0	0	0	(s)	9	(s)	0	0	1	10	(s)
Finland	0	0	0	0	0	0	0	(s)	0	0	0	(s)	1	(s)
France	0	0	0	0	0	0	0	2	1	1,006	0	171	1,180	39
French Pacific Isl	0	0	0	0	0	350	0	(s)	0	0	0	0	350	12
Ghana	0	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)
Greece	0	0	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Guatemala	0	59	0	0	0	0	2	3	(s)	0	0	0	(s)	2
Guinea	0	0	0	0	0	115	0	1	0	0	0	0	116	4
Honduras	0	(s)	(s)	0	0	0	1	9	0	0	0	1	11	(s)
Hong Kong	0	0	0	0	0	0	(s)	1	(s)	0	0	(s)	2	(s)
India	0	0	0	0	0	0	0	(s)	0	0	0	8	8	(s)
Indonesia	0	0	0	0	(s)	0	0	5	0	0	(s)	6	11	(s)
Iran	0	0	0	0	0	-0	0	0	0	0	0	0	0	0
Israel	0	(s)	0	0	0	0	(s)	0	(s)	1	0	(s)	1	(s)
Italy	0	(s)	0	0	(s)	0	0	1	1	1,229	0	211	1,442	48
Ivory Coast	0	0	0	0	51	0	0	(s)	0	0	(s)	0	51	2
Jamaica	0	31	0	0	0	220	(s)	16	0	0	0	1	268	9
Japan	0	0	0	0	528	1,300	259	44	2	2,270	(s)	27	4,431	148
Jordan	0	0	0	0	0	0	0	1	0	0	0	0	1	(s)
Korea, Republic of	0	1	0	0	0	179	(s)	5	1	62	0	61	310	10
Kuwait	0	0	(s)	0	0	0	0	2	0	(s)	0	0	2	(s)
Lebanon	0	0	0	0	0	0	0	1	0	0	0	0	1	(s)
Liberia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Malaysia	0	0	0	0	0	0	0	(s)	(s)	0	(s)	0	1	(s)
Mexico	0	825	4	36	0	0	1	51	3	50	0	9	980	33
Netherlands	0	0	0	0	0	0	3	(s)	(s)	652	(s)	64	720	24
Netherlands Antilles	0	1	0	64	244	209	0	(s)	0	0	0	(s)	518	17
New Zealand	0	(s)	0	107	0	0	0	1	(s)	(s)	(s)	0	485	16
Nicaragua	0	0	377	0	0	0	3	(s)	0	0	0	(s)	3	(s)
Nigeria	0	0	0	0	0	0	0	5	(s)	0	0	1	5	(s)
Norway	0	0	0	0	0	0	0	(s)	0	162	0	(s)	162	5
Pacific Trust Terr.	0	0	0	0	0	0	0	(s)	0	0	0	(s)	(s)	(s)
Panama	0	28	0	0	289	531	(s)	9	(s)	16	0	(s)	874	29
Peru	0	0	0	0	0	0	(s)	2	0	0	0	(s)	2	(s)
Philippines	0	0	0	0	0	0	(s)	1	(s)	0	0	(s)	3	(s)
Puerto Rico	465	8	0	0	(s)	0	1	20	2	0	(s)	11	506	17
Rep. of South Africa	0	0	0	0	(s)	0	0	16	8	0	(s)	1	24	1

See footnotes at end of table.

Table 22. Exports of Crude Oil and Petroleum Products by Destination, June 1984  
(Thousand Barrels)  
(continued)

Destination	Crude Oil <sup>1</sup>	LPG	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubri-cants	Waxes	Petro-leum Coke	Asphalt	Other <sup>2</sup>	Total	Total (Daily Average)
Saudi Arabia .....	0	4	0	0	0	0	0	10	(s)	0	0	3	17	1
Singapore .....	0	7	0	0	100	344	4	48	(s)	0	(s)	4	507	17
Spain .....	0	0	0	0	0	0	0	1	(s)	391	0	59	451	15
Surinam .....	0	0	0	0	0	0	0	(s)	0	0	0	(s)	(s)	(s)
Sweden .....	0	0	0	0	0	0	0	2	(s)	287	(s)	1	289	10
Switzerland .....	0	0	0	0	0	0	0	(s)	(s)	0	0	(s)	(s)	(s)
Thailand .....	0	0	30	0	0	0	0	5	0	0	0	(s)	35	1
Trinidad and Tobago .....	0	41	0	0	0	0	0	1	0	0	0	(s)	42	1
Turkey .....	0	0	0	0	(s)	0	0	(s)	(s)	26	0	30	56	2
United Arab Emirates .....	0	(s)	0	0	0	0	(s)	11	0	31	0	16	58	2
United Kingdom .....	0	1	0	0	1	0	(s)	1	(s)	0	(s)	3	7	(s)
U.S.S.R. ....	0	0	0	0	0	0	0	32	0	0	0	0	32	1
Uruguay .....	0	0	0	0	0	0	0	1	0	0	0	(s)	1	(s)
Venezuela .....	0	37	0	0	0	0	(s)	2	(s)	114	0	0	153	5
Virgin Islands .....	4,941	(s)	0	0	0	372	0	(s)	0	0	0	0	5,213	174
West Germany .....	0	0	0	0	0	0	0	2	1	53	0	68	125	4
Yugoslavia .....	0	0	0	0	0	0	0	(s)	0	55	0	(s)	55	2
Other .....	931	9	(s)	0	0	0	(s)	6	(s)	94	0	52	1,092	36
Total .....	6,665	1,579	514	272	1,589	5,275	291	476	37	8,062	4	1,159	25,924	864

<sup>1</sup> Exports of crude oil are prohibited by law. However, some crude oil is exchanged with Canada on a barrel for barrel basis, and crude oil is shipped to U.S. Territories (especially Puerto Rico and the Virgin Islands) to be refined there. The Statistical Tracking Systems count these exchanges and shipments as imports and exports.

<sup>2</sup> Includes pentanes plus, kerosene, naphtha less than 400 degrees F, other oils greater than 400 degrees F and miscellaneous products.

(s) = Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.



Table 23. Year-to-Date Exports of Crude Oil and Petroleum Products by Destination, January - June 1984  
(continued)

Destination	Crude Oil <sup>1</sup>	LPG	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubricants	Waxes	Petroleum Coke	Asphalt	Other <sup>2</sup>	Total	Total (Daily Average)
Saudi Arabia .....	0	49	0	0	0	0	(s)	128	(s)	0	0	22	200	1
Singapore .....	0	12	0	0	0	1,565	14	61	(s)	0	(s)	9	1,761	10
Spain .....	0	3	0	0	349	1,308	0	372	1	4,035	0	253	6,322	35
Surinam .....	0	0	0	0	0	0	0	5	0	35	0	1	41	(s)
Sweden .....	0	2	0	0	0	0	0	8	(s)	314	(s)	4	330	2
Switzerland .....	0	2	0	0	0	0	(s)	4	(s)	0	0	3	9	(s)
Thailand .....	0	(s)	30	0	0	0	1	36	(s)	(s)	0	62	129	1
Trinidad and Tobago .....	0	41	0	206	(s)	0	5	8	(s)	0	(s)	1	261	1
Turkey .....	0	(s)	0	0	0	0	(s)	1	(s)	302	0	174	477	3
United Arab Emirates .....	0	1	0	0	0	0	(s)	56	0	181	0	21	260	1
United Kingdom .....	0	42	(s)	0	7	1,087	1	31	2	67	(s)	16	1,254	7
U.S.S.R. ....	0	0	0	0	0	0	0	167	0	237	0	0	404	2
Uruguay .....	0	(s)	0	0	0	0	(s)	5	(s)	0	(s)	1	6	(s)
Venezuela .....	(s)	524	0	0	0	0	4	9	2	467	(s)	8	1,013	6
Virgin Islands .....	23,811	14	0	0	0	0	0	(s)	0	0	0	(s)	26,689	147
West Germany .....	0	(s)	0	0	0	2,864	0	(s)	12	479	(s)	83	638	4
Yugoslavia .....	0	0	0	0	0	0	(s)	64	(s)	341	0	(s)	341	2
Other .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total .....	35,993	8,523	891	944	8,533	28,913	546	3,092	230	37,362	50	5,004	130,080	715

<sup>1</sup> Exports of crude oil are prohibited by law. However, some crude oil is exchanged with Canada on a barrel for barrel basis, and crude oil is shipped to U.S. Territories (especially Puerto Rico and the Virgin Islands) to be refined there. The Statistical

<sup>2</sup> Tracking Systems count these exchanges and shipments as imports and exports. Includes pentanes plus, kerosene, naphtha less than 400 degrees F, other oils greater than 400 degrees F and miscellaneous products.

(S) = Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, June 1984  
(Thousand Barrels)

Commodity	PAD District I				PAD District II						PAD District III				PAD District IV		United States
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mtn.	Dist. V West Coast	
Crude Oil (incl. lease condensate)																	
Refinery .....	--	--	13,592	--	--	--	--	15,433	--	--	--	--	--	50,315	2,546	26,432	108,318
Tank Farms and Pipelines .....	--	--	1,405	--	--	--	--	60,912	--	--	--	--	--	97,481	9,583	26,230	195,611
Leases .....	--	--	58	--	--	--	--	1,589	--	--	--	--	--	16,918	1,330	1,639	21,534
Strategic Petroleum Reserve <sup>1</sup> .....	--	--	0	--	--	--	--	0	--	--	--	--	--	413,735	0	0	413,735
Alaskan In-Transit .....	--	--	0	--	--	--	--	0	--	--	--	--	--	0	0	27,229	27,229
Total .....	--	--	15,055	--	--	--	--	77,934	--	--	--	--	--	578,449	13,459	81,530	766,427
Total Stocks, All Oils (excl. Crude Oil)																	
Refinery .....	37,933	2,967	40,900	945	38,464	7,329	14,159	60,897	9,876	72,238	44,780	5,404	1,474	133,772	13,568	66,038	315,175
Bulk Terminal .....	--	--	106,811	--	--	--	--	80,917	--	--	--	--	--	84,997	3,253	24,517	300,495
Pipeline .....	--	--	26,037	--	--	--	--	36,630	--	--	--	--	--	40,036	2,745	4,986	110,434
Natural Gas Processing Plant .....	212	41	253	0	558	74	1,356	1,988	1,625	4,628	398	97	256	7,004	253	146	9,644
Total .....	--	--	174,001	--	--	--	--	180,432	--	--	--	--	--	265,809	19,819	95,687	735,748
Pentanes Plus																	
Refinery .....	16	0	16	0	49	36	123	208	106	138	127	18	11	400	17	16	657
Bulk Terminal .....	--	--	26	--	--	--	--	2,566	--	--	--	--	--	3,259	0	7	5,858
Pipeline .....	--	--	0	--	--	--	--	721	--	--	--	--	--	1,422	148	5	2,296
Natural Gas Processing Plant .....	3	10	13	0	56	23	262	341	452	588	132	42	32	1,246	87	23	1,710
Total .....	--	--	55	--	--	--	--	3,836	--	--	--	--	--	6,327	252	51	10,521
Liquefied Petroleum Gases																	
Refinery .....	669	14	683	176	1,836	164	579	2,755	151	922	1,824	36	27	2,960	281	671	7,350
Bulk Terminal .....	--	--	1,192	--	--	--	--	20,526	--	--	--	--	--	53,948	66	989	76,721
Pipeline .....	--	--	1,213	--	--	--	--	7,338	--	--	--	--	--	5,415	430	0	14,396
Natural Gas Processing Plant .....	185	31	216	0	500	51	1,094	1,645	1,022	4,038	266	53	224	5,603	154	123	7,741
Total .....	--	--	3,304	--	--	--	--	32,264	--	--	--	--	--	67,926	931	1,783	106,208
Ethane																	
Refinery .....	23	0	23	0	3	7	0	10	0	6	0	0	0	6	0	0	39
Bulk Terminal .....	--	--	0	--	--	--	--	2,704	--	--	--	--	--	13,022	0	0	15,726
Pipeline .....	--	--	0	--	--	--	--	1,756	--	--	--	--	--	1,756	128	0	3,640
Natural Gas Processing Plant .....	0	0	0	0	25	0	238	263	107	1,408	0	1	17	1,533	1	0	1,797
Total .....	--	--	23	--	--	--	--	4,733	--	--	--	--	--	16,317	129	0	21,202

See footnotes at end of table.

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, June 1984  
(Thousand Barrels) (continued)

Commodity	PAD District I			PAD District II						PAD District III				PAD District IV		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La. Ark.	New Mexico	Total	Rocky Mt.		Dist. V
Propane for Petrochemical Feedstock Use																	
Refinery .....	44	0	44	0	81	0	1	82	2	7	51	0	0	60	0	186	
Total .....	—	—	44	—	—	—	—	82	—	—	—	—	—	60	0	186	
Propane For Other Uses																	
Refinery .....	547	6	553	3	1,183	22	171	1,379	49	48	1,356	4	3	1,460	155	269	
Bulk Terminal .....	—	—	903	—	—	—	—	14,591	—	—	—	—	—	24,168	65	283	
Pipeline .....	—	—	1,162	—	—	—	—	3,948	—	—	—	—	—	2,500	177	0	
Natural Gas Processing Plant .....	153	31	184	0	346	23	517	886	544	1,428	136	25	114	2,247	102	7,787	
Total .....	—	—	2,802	—	—	—	—	20,804	—	—	—	—	—	30,375	499	660	
Normal Butane For Petro. Feed Use																	
Refinery .....	0	0	0	0	0	24	0	24	0	7	0	1	0	8	5	39	
Total .....	—	—	0	—	—	—	—	24	—	—	—	—	—	8	5	39	
Normal Butane For Other Uses																	
Refinery .....	55	8	63	115	345	76	251	787	69	705	175	22	17	988	89	367	
Bulk Terminal .....	—	—	270	—	—	—	—	2,203	—	—	—	—	—	10,733	1	510	
Pipeline .....	—	—	51	—	—	—	—	945	—	—	—	—	—	774	82	0	
Natural Gas Processing Plant .....	30	0	30	0	105	20	284	409	312	818	84	19	79	1,312	42	8	
Total .....	—	—	414	—	—	—	—	4,344	—	—	—	—	—	13,807	214	885	
Isobutane																	
Refinery .....	0	0	0	58	224	35	156	473	31	149	242	9	7	438	32	33	
Bulk Terminal .....	—	—	19	—	—	—	—	1,028	—	—	—	—	—	6,025	0	196	
Pipeline .....	—	—	0	—	—	—	—	689	—	—	—	—	—	385	43	0	
Natural Gas Processing Plant .....	2	0	2	0	24	8	55	87	59	384	46	8	14	511	9	7	
Total .....	—	—	21	—	—	—	—	2,277	—	—	—	—	—	7,359	84	236	
Other Hydrocarbons and Alcohol																	
Refinery .....	92	0	92	0	136	0	1	137	1	88	10	0	0	99	0	2	
Total .....	—	—	92	—	—	—	—	137	—	—	—	—	—	99	0	2	
Unfinished Oils																	
Refinery .....	4,378	310	4,688	35	2,839	113	1,151	4,138	836	7,642	5,343	259	25	14,105	559	5,393	
Naphtha and Lighter .....	1,495	9	1,504	0	2,087	3	429	2,519	581	5,464	1,945	56	5	8,051	612	3,644	
Kerosene and Lighter Gas Oils .....	5,667	287	5,954	103	3,834	668	1,849	6,454	803	9,668	6,801	128	180	17,580	813	11,800	
Heavy Gas Oils .....	2,605	210	2,815	1	2,895	28	1,290	4,214	536	5,343	3,811	30	6	9,726	735	5,477	
Residuum .....	14,145	816	14,961	139	11,655	812	4,719	17,325	2,756	28,117	17,900	473	216	49,462	2,719	26,314	
Total .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	110,781	

See footnotes at end of table.

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, June 1984  
(Thousand Barrels) (continued)

Commodity	PAD District I			PAD District II					PAD District III					PAD District IV		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.		Dist. IV V
														West Coast			
Motor Gasoline Blending Components																	
Refinery .....	5,349	103	5,452	45	4,807	683	1,453	6,988	1,397	9,551	5,675	119	183	16,925	2,349	8,312	40,026
Bulk Terminal .....	—	—	84	—	—	—	—	195	—	—	—	—	—	758	0	239	1,266
Pipeline .....	—	—	0	—	—	—	—	2	—	—	—	—	—	0	0	0	2
Total .....	—	—	5,536	—	—	—	—	7,175	—	—	—	—	—	17,683	2,349	8,551	41,294
Aviation Gasoline Blending Components																	
Refinery .....	11	0	11	0	101	0	55	156	0	0	149	0	0	149	0	11	327
Total .....	—	—	11	—	—	—	—	156	—	—	—	—	—	149	0	11	327
Total Finished Motor Gasoline																	
Refinery .....	5,061	328	5,389	63	6,807	1,125	2,361	10,356	2,068	9,343	4,959	1,839	224	18,433	2,482	9,025	45,685
Bulk Terminal .....	—	—	42,649	—	—	—	—	30,896	—	—	—	—	—	14,601	1,904	11,883	101,923
Pipeline .....	—	—	15,796	—	—	—	—	17,066	—	0	0	0	0	20,253	1,195	2,280	56,530
Natural Gas Processing Plant .....	24	0	24	0	0	0	0	0	0	0	0	0	0	0	11	0	35
Total .....	—	—	63,798	—	—	—	—	58,308	—	—	—	—	—	53,287	5,592	23,188	204,173
Finished Leaded Motor Gasoline																	
Refinery .....	1,810	224	2,034	34	3,078	733	1,295	5,140	1,259	4,333	1,563	664	118	7,937	1,626	4,095	20,832
Bulk Terminal .....	—	—	20,443	—	—	—	—	15,453	—	—	—	—	—	8,049	1,189	5,758	50,892
Pipeline .....	—	—	6,706	—	—	—	—	8,561	—	—	—	—	—	7,960	772	931	24,930
Natural Gas Processing Plant .....	14	0	14	0	0	0	0	0	0	0	0	0	0	0	8	0	22
Total .....	—	—	29,197	—	—	—	—	29,154	—	—	—	—	—	23,946	3,595	10,784	96,676
Finished Unleaded Motor Gasoline																	
Refinery .....	3,251	104	3,355	29	3,729	392	1,066	5,216	809	5,010	3,396	1,175	106	10,496	856	4,930	24,853
Bulk Terminal .....	—	—	22,206	—	—	—	—	15,433	—	—	—	—	—	6,552	715	6,125	51,031
Pipeline .....	—	—	9,030	—	—	—	—	8,505	—	—	—	—	—	12,293	423	1,349	31,600
Natural Gas Processing Plant .....	10	0	10	0	0	0	0	0	0	0	0	0	0	0	3	0	13
Total .....	—	—	34,601	—	—	—	—	29,154	—	—	—	—	—	29,341	1,997	12,404	107,497
Finished Aviation Gasoline																	
Refinery .....	34	0	34	0	95	0	14	109	109	293	152	0	0	554	35	240	972
Bulk Terminal .....	—	—	449	—	—	—	—	332	—	—	—	—	—	77	12	295	1,165
Pipeline .....	—	—	0	—	—	—	—	91	—	—	—	—	—	10	9	37	147
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	74	0	0	0	0	74	0	0	74
Total .....	—	—	483	—	—	—	—	532	—	—	—	—	—	715	56	572	2,358

See footnotes at end of table.



Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, June 1984  
(Thousand Barrels) (continued)

Commodity	PAD District I			PAD District II						PAD District III					PAD District IV		United States
	East Coast	Appa- lachi- an #1	Total	Appa- lachi- an #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mnt.	Dist. IV	
Naphtha-Type Jet Fuel																	
Refinery .....	269	32	301	0	502	104	127	733	306	704	316	184	177	1,687	221	940	3,882
Bulk Terminal .....	—	—	405	—	—	—	—	661	—	—	—	—	—	118	6	497	1,687
Pipeline .....	—	—	172	—	—	—	—	153	—	—	—	—	—	426	106	480	1,337
Total .....	—	—	878	—	—	—	—	1,547	—	—	—	—	—	2,231	333	1,917	6,906
Kerosene-Type Jet Fuel																	
Refinery .....	912	0	912	26	1,311	159	159	1,655	291	2,928	2,934	6	57	6,216	323	3,282	12,388
Bulk Terminal .....	—	—	4,924	—	—	—	—	4,105	—	—	—	—	—	1,839	226	1,779	12,873
Pipeline .....	—	—	3,164	—	—	—	—	2,087	—	—	—	—	—	4,645	239	604	10,739
Total .....	—	—	9,000	—	—	—	—	7,847	—	—	—	—	—	12,700	788	5,665	36,000
Kerosene																	
Refinery .....	252	87	339	0	373	44	347	764	88	520	594	46	87	1,335	0	209	2,647
Bulk Terminal .....	—	—	3,093	—	—	—	—	675	—	—	—	—	—	532	37	36	4,373
Pipeline .....	—	—	36	—	—	—	—	174	—	—	—	—	—	655	0	0	865
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	2
Total .....	—	—	3,468	—	—	—	—	1,613	—	—	—	—	—	2,524	37	245	7,887
Distillate Fuel Oils																	
Refinery .....	4,677	279	4,956	57	4,582	1,616	2,466	8,721	996	8,470	4,004	567	255	14,292	2,096	5,321	35,386
Bulk Terminal .....	—	—	29,295	—	—	—	—	14,110	—	—	—	—	—	4,859	749	5,079	54,092
Pipeline .....	—	—	5,692	—	—	—	—	8,913	—	—	—	—	—	6,924	618	1,241	23,368
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	2
Total .....	—	—	39,943	—	—	—	—	31,744	—	—	—	—	—	26,077	3,463	11,641	112,868
Residual Fuel Oils																	
Refinery .....	2,287	104	2,391	55	1,441	246	138	1,880	385	3,964	2,670	123	18	7,160	510	7,103	19,044
Bulk Terminal .....	—	—	19,517	—	—	—	—	1,699	—	—	—	—	—	4,053	0	2,333	27,602
Pipeline .....	—	—	5	—	—	—	—	0	—	—	—	—	—	1	0	159	165
Total .....	—	—	21,913	—	—	—	—	3,579	—	—	—	—	—	11,214	510	9,595	46,811
Naphtha < 400 Deg. Petro. Feedstock																	
Refinery .....	269	0	269	0	125	0	55	180	90	839	458	33	0	1,420	0	73	1,942
Total .....	269	0	269	0	125	0	55	180	90	839	458	33	0	1,420	0	73	1,942
Other Oils > 400 Deg. Petro. Feedstock																	
Refinery .....	6	0	6	0	12	0	0	12	214	1,298	293	0	0	1,805	3	136	1,962
Total .....	6	0	6	0	12	0	0	12	214	1,298	293	0	0	1,805	3	136	1,962

See footnotes at end of table.

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, June 1984  
(Thousand Barrels) (continued)

Commodity	PAD District I			PAD District II						PAD District III					PAD District IV		United States
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mts.	Dist. V	
<b>Special Naphthas</b>																	
Refinery .....	85	27	112	0	182	0	171	353	27	1,169	79	144	0	1,419	9	179	2,072
Bulk Terminal .....	—	—	631	—	—	—	—	154	—	—	—	—	—	62	0	36	883
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	68	0	0	0	0	68	0	0	68
Total .....	—	—	743	—	—	—	—	507	—	—	—	—	—	1,549	9	215	3,023
<b>Lubricants</b>																	
Refinery .....	900	909	1,809	0	760	0	340	1,100	28	2,507	1,224	593	0	4,352	70	457	7,788
Bulk Terminal .....	—	—	1,202	—	—	—	—	988	—	—	—	—	—	273	2	805	3,270
Total .....	—	—	3,011	—	—	—	—	2,088	—	—	—	—	—	4,625	72	1,262	11,058
<b>Waxes</b>																	
Refinery .....	4	87	91	0	37	0	20	57	14	202	128	47	0	391	0	54	593
Total .....	—	—	91	—	—	—	—	57	—	—	—	—	—	391	0	54	593
<b>Petroleum Coke</b>																	
Refinery .....	536	0	536	0	277	666	143	1,086	0	295	728	206	0	1,229	174	1,533	4,558
Total .....	536	0	536	0	277	666	143	1,086	0	295	728	206	0	1,229	174	1,533	4,558
<b>Asphalt and Road Oil</b>																	
Refinery .....	2,164	162	2,326	384	3,268	1,666	878	6,196	813	367	442	880	219	2,721	2,272	2,026	15,541
Bulk Terminal .....	—	—	3,230	—	—	—	—	4,009	—	—	—	—	—	557	249	315	8,360
Total .....	—	—	5,556	—	—	—	—	10,205	—	—	—	—	—	3,278	2,521	2,341	23,901
<b>Miscellaneous Products</b>																	
Refinery .....	195	19	214	0	108	8	10	126	36	523	114	90	0	763	7	134	1,244
Bulk Terminal .....	—	—	114	—	—	—	—	21	—	—	—	—	—	61	2	224	422
Pipeline .....	—	—	19	—	—	—	—	85	—	—	—	—	—	285	0	180	569
Natural Gas Processing Plant .....	0	0	0	0	2	0	0	2	7	0	0	2	0	9	1	0	12
Total .....	—	—	347	—	—	—	—	234	—	—	—	—	—	1,118	10	538	2,247
<b>Total Stocks, All Oils</b> .....																	
	—	—	189,056	—	—	—	—	258,366	—	—	—	—	—	844,258	33,278	177,217	1,502,175

<sup>1</sup> Includes 33,879 thousand barrels of domestic crude oil.

Source: See Explanatory Notes on Data Collection and Estimation.

— Not Applicable.

Table 25. Refinery and Bulk Terminal Stocks of Selected Petroleum Products by State, June 1984  
(Thousand Barrels)

State	Leaded Motor Gasoline	Unleaded Motor Gasoline	Kerosene	Distillate Fuel Oil	Residual Fuel Oil
<b>PAD District I Total</b>	<b>22,477</b>	<b>25,561</b>	<b>3,432</b>	<b>34,251</b>	<b>21,908</b>
Connecticut	599	609	50	1,608	320
Delaware, D.C., Maryland	1,138	1,451	172	2,623	1,756
Florida	2,905	3,744	215	1,938	1,612
Georgia	1,291	1,571	88	966	353
Maine	418	556	84	861	720
Massachusetts	1,113	1,295	49	2,091	783
New Hampshire, Vermont	61	64	w	450	233
New Jersey	3,199	4,898	690	9,046	8,984
New York	4,794	2,713	338	4,917	3,201
North Carolina	1,208	1,318	569	1,450	667
Pennsylvania	2,582	3,925	545	4,329	1,529
Rhode Island	187	463	w	788	22
South Carolina	867	954	205	766	749
Virginia	1,823	1,757	382	2,198	908
West Virginia	292	243	12	220	71
<b>PAD District II Total</b>	<b>20,593</b>	<b>20,649</b>	<b>1,439</b>	<b>22,831</b>	<b>3,579</b>
Illinois	3,670	4,599	235	4,515	869
Indiana	3,023	2,977	171	2,653	399
Iowa	736	688	w	1,187	w
Kansas	1,066	877	16	1,467	77
Kentucky	876	1,267	110	1,163	194
Michigan	2,232	2,379	130	2,013	529
Minnesota	1,321	667	w	1,801	287
Missouri	871	618	w	565	w
Nebraska	470	199	0	230	0
North & South Dakota	419	354	0	942	w
Ohio	2,619	2,947	280	2,360	484
Oklahoma	1,035	900	334	1,732	177
Tennessee	1,140	1,006	88	854	164
Wisconsin	1,115	1,171	w	1,349	115
<b>PAD District III Total</b>	<b>15,986</b>	<b>17,048</b>	<b>1,867</b>	<b>19,151</b>	<b>11,213</b>
Alabama	953	811	67	862	879
Arkansas	205	175	w	261	56
Louisiana	1,882	3,203	603	4,238	3,969
Mississippi	1,191	2,108	13	874	468
New Mexico	244	223	w	349	18
Texas	11,511	10,528	1,093	12,567	5,823
<b>PAD District IV Total</b>	<b>2,815</b>	<b>1,571</b>	<b>37</b>	<b>2,845</b>	<b>510</b>
Colorado	775	479	0	423	109
Idaho	264	131	0	227	0
Montana	615	326	w	817	87
Utah	295	177	0	587	202
Wyoming	866	458	w	791	112
<b>PAD District V Total</b>	<b>9,853</b>	<b>11,055</b>	<b>245</b>	<b>10,400</b>	<b>9,436</b>
Alaska	443	288	w	1,111	w
Arizona	461	456	w	276	0
California	5,704	7,521	137	5,390	6,347
Hawaii	286	174	0	243	w
Nevada	187	218	w	148	w
Oregon	893	729	w	968	370
Washington	1,879	1,667	w	2,264	1,555
<b>United States Total</b>	<b>71,724</b>	<b>75,884</b>	<b>7,020</b>	<b>89,478</b>	<b>46,646</b>

w = Withheld to avoid disclosure of individual company data.  
Source: See Explanatory Notes on Data Collection and Estimation.

Table 26. Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge between PAD Districts, June 1984  
(Thousand Barrels)

Commodity	From I to			From II to					From III to					From IV to					From V to			
	II	III	V	I	III	IV	V	I	II	IV	V	I	II	III	V	I	II	III	IV			
Crude Oil (Tanker and Barge only) .....	9	261	0	26	0	0	0	0	444	1,687	0	0	0	0	0	2,923	642	12,126	0			
Petroleum Products .....	8,893	405	0	2,759	8,665	2,031	844	73,600	27,876	0	1,648	1,724	915	1,278	0	0	0	73	0			
Pentanes Plus .....	0	0	0	0	841	0	0	0	852	0	0	83	150	0	0	0	0	0	0			
Liquefied Petroleum Gases .....	0	0	0	429	5,161	45	0	1,058	6,293	0	0	627	765	0	0	0	0	0	0			
Unfinished Oils .....	0	0	0	0	0	0	844	130	40	0	0	0	0	0	0	0	0	0	0			
Motor Gasoline Blending Components .....	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0			
Aviation Gasoline Blending Components .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Finished Motor Gasoline .....	5,706	0	0	1,456	1,790	1,301	0	45,422	12,612	0	890	574	0	887	0	0	0	0	0			
Finished Leaded Motor Gasoline .....	2,979	0	0	484	906	642	0	16,584	5,855	0	445	359	0	547	0	0	0	0	0			
Finished Unleaded Motor Gasoline .....	2,727	0	0	972	884	659	0	28,838	6,757	0	445	215	0	340	0	0	0	0	0			
Finished Aviation Gasoline .....	15	0	0	0	0	22	0	274	173	0	0	0	0	0	0	0	0	0	0			
Naphtha-Type Jet Fuel .....	121	81	0	0	209	61	0	281	61	0	184	78	0	52	0	0	0	0	0			
Kerosene-Type Jet Fuel .....	162	0	0	136	38	449	0	8,517	1,104	0	201	4	0	92	0	0	0	0	0			
Kerosene .....	3	0	0	0	0	0	0	229	0	0	0	0	0	0	0	0	0	0	0			
Distillate Fuel Oil .....	2,809	0	0	310	532	214	0	14,916	5,617	0	363	358	0	247	0	0	0	0	0			
Residual Fuel Oil .....	0	0	0	35	34	0	0	1,640	1	0	0	0	0	0	0	0	0	0	0			
Naphtha and Other Oils for Petro. Feedstock .....	34	0	0	17	0	0	0	9	19	0	0	0	0	0	0	0	0	0	0			
Special Naphthas .....	0	0	0	0	0	0	0	147	120	0	0	0	0	0	0	0	0	0	0			
Lubricants .....	0	148	0	35	23	0	0	642	475	0	10	0	0	0	0	0	0	40	0			
Waxes .....	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0			
Asphalt and Road Oil .....	0	120	0	116	0	0	0	183	509	0	0	0	0	0	0	0	0	0	0			
Miscellaneous Products .....	43	56	0	225	37	0	0	105	0	0	0	0	0	0	0	0	0	0	0			
Total All Products .....	8,902	666	0	2,785	8,665	2,031	844	74,044	29,563	0	1,648	1,724	915	1,278	2,923	642	12,199	0	0			

See footnotes at end of table.

Table 27. Movements of Petroleum Products by Pipeline between PAD Districts, June 1984  
(Thousand Barrels)

Commodity	From I to			From II to			From III to					From IV to				From V to			
	II	III		I	III	IV	I	II	IV	V	II	III	V	II	III	V	III	IV	
Pentanes Plus .....	0	0	0	0	841	0	0	0	852	0	0	83	150	0	0	0	0	0	
Liquefied Petroleum Gases .....	0	0	0	429	5,161	45	873	6,293	0	0	0	627	765	0	0	0	0	0	
Motor Gasoline Blending Components .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aviation Gasoline Blending Components .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Finished Motor Gasoline .....	4,379	0	0	1,219	1,737	1,301	34,952	11,968	0	890	574	0	887	0	0	0	0	0	
Finished Leaded Motor Gasoline .....	2,227	0	0	401	880	642	12,925	5,561	0	445	359	0	547	0	0	0	0	0	
Finished Unleaded Motor Gasoline .....	2,152	0	0	818	857	659	22,027	6,407	0	445	215	0	340	0	0	0	0	0	
Finished Aviation Gasoline .....	15	0	0	0	0	22	25	110	0	0	0	0	0	0	0	0	0	0	
Naphtha-Type Jet Fuel .....	0	0	0	0	208	0	281	61	0	184	78	0	52	0	0	0	0	0	
Kerosene-Type Jet Fuel .....	114	0	0	120	38	449	6,561	1,019	0	201	4	0	92	0	0	0	0	0	
Kerosene .....	0	0	0	0	0	0	180	0	0	0	0	0	0	0	0	0	0	0	
Distillate Fuel Oil .....	1,959	0	0	249	524	214	11,598	4,854	0	363	358	0	247	0	0	0	0	0	
Residual Fuel Oil .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous Products .....	0	0	0	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total .....	6,467	0	2,212	8,510	2,031	54,470	25,157	1,638	1,724	915	1,278	0	0	0	0	0	0	0	

Source: See Explanatory Notes on Data Collection and Estimation.

Table 28. Movements of Crude Oil and Petroleum Products by Tanker and Barge between PAD Districts, June 1984  
(Thousand Barrels)

Commodity	From I to			From II to			From III to					From V to		
	II	III	V	I	III	V	I	New Eng	Cent Atl	Low Atl	II	V	I	II
Crude Oil	9	261	0	26	0	0	444	0	444	0	1,687	0	2,923	642
Petroleum Products	2,426	405	0	547	155	844	19,130	787	3,341	15,002	2,719	10	0	0
Liquefied Petroleum Gases	0	0	0	0	0	0	185	0	0	185	0	0	0	73
Unfinished Oils	0	0	0	0	0	844	130	0	62	68	40	0	0	0
Motor Gasoline Blending Components	0	0	0	0	0	0	37	0	0	37	0	0	0	0
Finished Motor Gasoline	1,327	0	0	237	53	0	10,470	28	1,130	9,312	644	0	0	0
Finished Leaded Motor Gasoline	752	0	0	83	26	0	3,659	0	124	3,535	294	0	0	0
Finished Unleaded Motor Gasoline	575	0	0	154	27	0	6,811	28	1,006	5,777	350	0	0	0
Finished Aviation Gasoline	0	0	0	0	0	0	249	23	94	132	63	0	0	0
Naphtha-Type Jet Fuel	121	81	0	0	0	0	1,956	168	435	1,353	85	0	0	0
Kerosene-Type Jet Fuel	48	0	0	16	0	0	0	0	0	0	0	0	0	0
Kerosene	3	0	0	0	0	0	49	0	0	49	0	0	0	0
Distillate Fuel Oil	850	0	0	61	8	0	3,318	16	903	2,399	763	0	0	0
Residual Fuel Oil	0	0	0	35	34	0	1,640	552	0	1,088	1	0	0	0
Naphtha and Other Oils for Petro. Feed. Use	34	0	0	17	0	0	9	0	0	9	19	0	0	0
Special Naphthas	0	0	0	0	0	0	147	0	121	26	120	0	0	0
Lubricants	0	148	0	35	23	0	642	0	436	206	475	10	0	40
Waxes	0	0	0	0	0	0	10	0	10	0	0	0	0	0
Asphalt and Road Oil	0	120	0	116	0	0	183	0	45	138	509	0	0	0
Miscellaneous Products	43	56	0	30	37	0	105	0	105	0	0	0	0	33
Total	2,435	666	0	573	155	844	19,574	787	3,785	15,002	4,406	10	2,923	642
														12,199

Source: See Explanatory Notes on Data Collection and Estimation.

Table 29. Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker and Barge between PAD Districts, June 1984  
(Thousand Barrels)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD District V		
	Receipts into PADD I	Shipments from PADD I	Net Receipts PADD I	Receipts into PADD II	Shipments from PADD II	Net Receipts PADD II	Receipts into PADD III	Shipments from PADD III	Net Receipts PADD III	Receipts into PADD IV	Shipments from PADD IV	Net Receipts PADD IV	Receipts into PADD V	Shipments from PADD V	Net Receipts PADD V
<b>Crude Oil (Tanker and Barge only)</b>	3,393	270	3,123	2,338	26	2,312	12,387	2,131	10,256	0	0	0	15,691	0	-15,691
<b>Petroleum Products</b>	76,359	9,298	67,061	38,493	14,299	24,194	10,058	103,124	-93,066	2,031	3,917	-1,886	3,770	73	3,697
Pentanes Plus	0	0	0	935	841	94	991	852	139	0	233	-233	0	0	0
Liquefied Petroleum Gases	1,487	0	1,487	6,920	5,635	1,285	5,926	7,351	-1,425	45	1,392	-1,347	0	0	0
Unfinished Oils	130	0	130	40	844	-804	0	170	-170	0	0	0	844	0	844
Motor Gasoline Blending Components	37	0	37	0	0	0	0	37	-37	0	0	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	46,878	5,706	41,172	18,892	4,547	14,345	1,790	58,924	-57,134	1,301	1,461	-160	1,777	0	1,777
Finished Leaded Motor Gasoline	17,068	2,979	14,089	9,193	2,032	7,161	906	22,884	-21,978	642	906	-264	992	0	992
Finished Unleaded Motor Gasoline	29,810	2,727	27,083	9,699	2,515	7,184	884	36,040	-35,156	659	555	104	785	0	785
Finished Aviation Gasoline	274	15	259	188	22	166	0	447	-447	22	0	22	0	0	0
Naphtha-Type Jet Fuel	281	202	79	260	209	51	290	526	-236	0	130	-130	236	0	236
Kerosene-Type Jet Fuel	8,653	162	8,491	1,270	623	647	38	9,822	-9,784	449	96	353	293	0	293
Kerosene	229	3	226	3	0	3	0	229	-229	0	0	0	0	0	0
Distillate Fuel Oil	15,226	2,809	12,417	8,784	1,056	7,728	532	20,896	-20,364	214	605	-391	610	0	610
Residual Fuel Oil	1,675	0	1,675	1	69	-68	34	1,641	-1,607	0	0	0	0	0	0
Naphtha and Other Oils for Petro.															
Feedstock Use	26	34	-8	53	17	36	0	28	-28	0	0	0	0	0	0
Special Naphthas	147	0	147	120	0	120	0	267	-267	0	0	0	0	0	0
Lubricants	677	148	529	475	58	417	211	1,127	-916	0	0	0	10	40	-30
Waxes	10	0	10	0	0	0	0	10	-10	0	0	0	0	0	0
Asphalt and Road Oil	299	120	179	509	116	393	120	692	-572	0	0	0	0	0	0
Miscellaneous Products	330	99	231	43	262	-219	126	105	21	0	0	0	0	33	-33
<b>Total All Products</b>	79,752	9,588	70,164	40,831	14,325	26,506	22,445	105,255	-82,810	2,031	3,917	-1,886	3,770	15,764	-11,994

Source: See Explanatory Notes on Data Collection and Estimation.

Table 30. Production of Residual Fuel Oil by Sulfur Content, June 1984  
(Thousand Barrels)

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		Dist. IV Rocky Mt.	Dist. V West Coast
Residual Fuel Oil	3,262	84	3,345	59	1,045	164	267	1,535	638	6,450	2,621	233	10	9,952	230	10,161	25,224
0.00 to 0.30% Sulfur	672	25	697	0	87	9	0	96	78	474	517	75	7	1,151	75	469	2,488
0.31 to 1.00% Sulfur	2,286	1	2,287	39	193	0	143	375	457	1,013	740	92	0	2,302	70	2,364	7,398
Greater Than 1.00% Sulfur	304	58	362	20	765	155	124	1,064	103	4,963	1,364	66	3	6,499	85	7,328	15,338

Source: See Explanatory Notes on Data Collection and Estimation.

Table 31. Stocks of Residual Fuel Oil by Sulfur Content, June 1984  
(Thousand Barrels)

Commodity	PAD District I			PAD District II				PAD District III				PAD District IV		United States			
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico		Total	Rocky Mt.	Dist. V West Coast
Residual Fuel Oil — 0.00 to 0.30% Sulfur																	
Refinery .....	431	27	458	0	46	8	10	64	94	34	297	23	11	459	103	371	1,455
Bulk Terminal .....	—	—	4,041	—	—	—	—	6	—	—	—	—	—	249	0	52	4,348
Total .....	—	—	4,499	—	—	—	—	70	—	—	—	—	—	708	103	423	5,803
Residual Fuel Oil — 0.31 to 1.00% Sulfur																	
Refinery .....	1,156	3	1,159	52	533	0	66	651	128	1,173	1,162	50	0	2,513	123	1,779	6,225
Bulk Terminal .....	—	—	6,503	—	—	—	—	461	—	—	—	—	—	1,769	0	778	9,511
Total .....	—	—	7,662	—	—	—	—	1,112	—	—	—	—	—	4,282	123	2,557	15,736
Residual Fuel Oil — Greater than 1.00% Sulfur																	
Refinery .....	700	74	774	3	862	238	62	1,165	163	2,757	1,211	50	7	4,188	284	4,953	11,364
Bulk Terminal .....	—	—	8,973	—	—	—	—	1,232	—	—	—	—	—	2,035	0	1,503	13,743
Total .....	—	—	9,747	—	—	—	—	2,397	—	—	—	—	—	6,223	284	6,456	25,107

Source: See Explanatory Notes on Data Collection and Estimation.

— Not Applicable

Table 32. Movements of Residual Fuel Oil by Tanker and Barge between PAD Districts, by Sulfur Content, June 1984  
(Thousand Barrels)

Commodity	From I to			From II to			From III to			From V to		
	II	III	V	I	III	V	I	New Eng	Cent Atl	Low Atl	II	III
Residual Fuel Oil	0	0	0	35	34	0	1,640	552	0	1,088	1	0
0.00 to 0.30% Sulfur	0	0	0	0	0	0	313	0	0	313	0	0
0.31 to 1.00% Sulfur	0	0	0	0	0	0	364	0	0	364	0	0
Greater Than 1.00% Sulfur	0	0	0	35	34	0	963	552	0	411	1	0

Source: See Explanatory Notes on Data Collection and Estimation.

Table 33. Imports of Residual Fuel Oil by Sulfur Content by Country of Origin, June 1984  
(Thousand Barrels)

Country	Residual Fuel Oil				Total
	0.00 to 0.30%	0.31 to 1.00%	Greater Than 1.00%		
<b>Arab OPEC</b>					
Algeria .....	1,186	0	0		1,186
Iraq .....	0	0	0		0
Kuwait .....	0	0	792		792
Libya .....	0	0	0		0
Oatar .....	0	0	0		0
Saudi Arabia .....	0	0	0		0
United Arab Emirates .....	0	0	0		0
Subtotal Arab OPEC .....	1,186	0	792		1,978
<b>Other OPEC</b>					
Ecuador .....	0	0	411		411
Gabon .....	0	0	0		0
Indonesia .....	939	153	42		1,134
Iran .....	0	0	0		0
Nigeria .....	0	0	0		0
Venezuela .....	485	305	3,223		4,013
Subtotal Other OPEC .....	1,424	459	3,675		5,558
<b>Other</b>					
Angola .....	0	0	0		0
Australia .....	0	3	17		19
Bahamas .....	491	0	0		491
Bolivia .....	0	0	0		0
Brazil .....	1,083	812	0		1,895
Brunei .....	0	0	0		0
Canada .....	32	234	358		623
Congo .....	0	167	0		167
Egypt .....	0	0	0		0
France .....	0	0	0		0
Ghana .....	0	0	0		0
Liberia .....	0	0	0		0
Malaysia .....	0	45	(s)		45
Mexico .....	0	0	6		6
Netherlands .....	0	0	0		0
Netherlands Antilles .....	256	507	3,849		4,613
Norway .....	0	0	0		0
Oman .....	0	0	0		0
People's Republic of China .....	0	0	0		0
Peru .....	0	207	250		456
Puerto Rico .....	0	0	0		0
Romania .....	0	389	0		389
Spain .....	0	0	0		0
Syria .....	0	0	0		0
Trinidad .....	0	0	0		0
Tunisia .....	0	0	0		0
United Kingdom .....	0	0	0		0
Virgin Islands .....	458	1,351	1,082		2,890
Yugoslavia .....	0	0	0		0
Zaire .....	0	0	0		0

See footnotes at end of table.



Parts of Residual Fuel Oil by Sulfur Content by Country of Origin, June 1984  
(Thousand Barrels)  
(continued)

Country	Residual Fuel Oil			Total
	0.00 to 0.30%	0.31 to 1.00%	Greater Than 1.00%	
Other				
Other Western Hemisphere .....	147	0	475	622
Other Eastern Hemisphere .....	(s)	446	83	529
Subtotal Other .....	2,467	4,161	6,119	12,747
Total Imports .....	5,077	4,619	10,586	20,283

(s) = Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

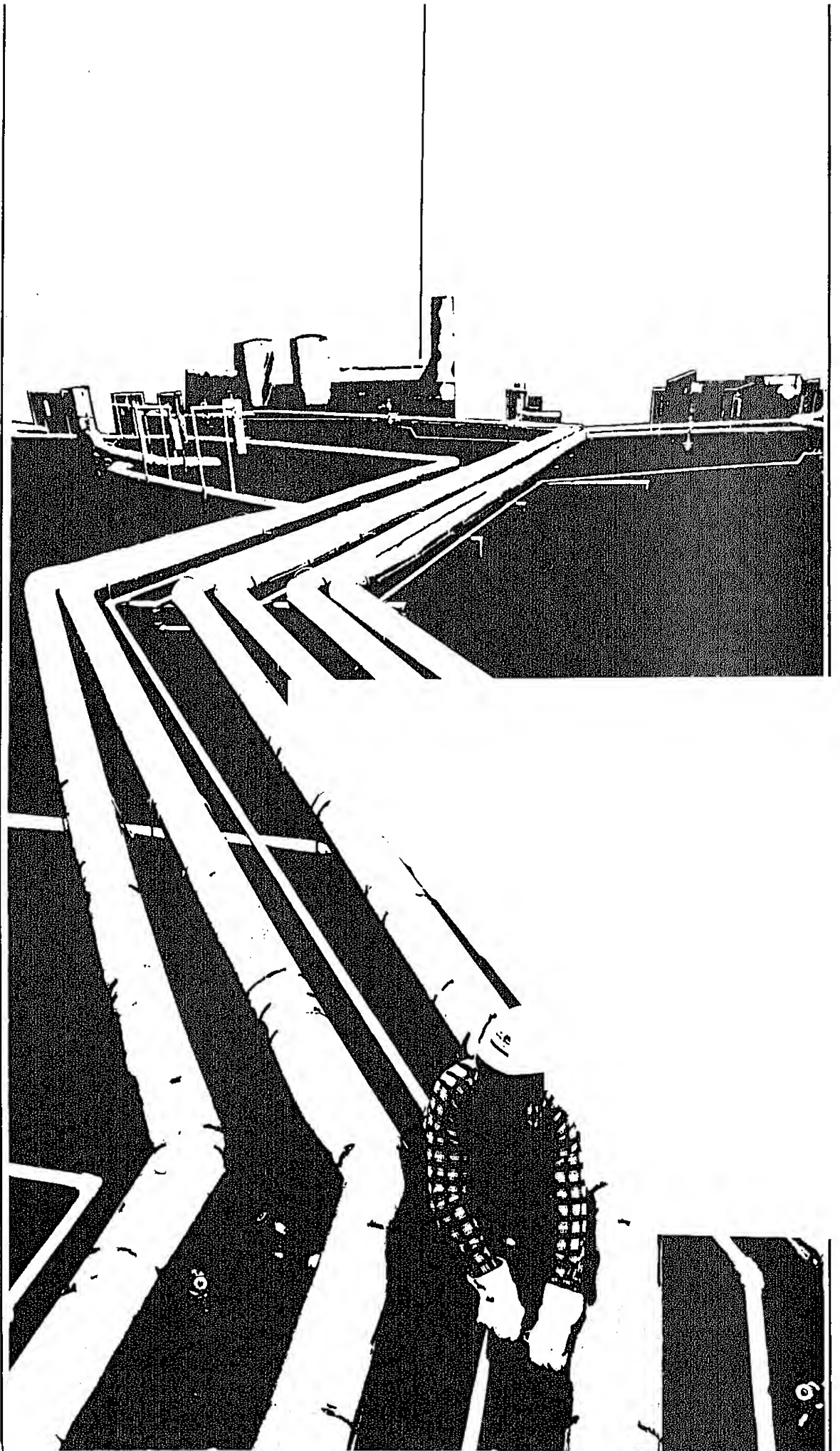
Table 34. Imports of Residual Fuel Oil by Sulfur Content by State of Entry, June 1984  
(Thousand Barrels)

State	Residual Fuel Oil			Total
	0.00 to 0.30%	0.31 to 1.00%	Greater Than 1.00%	
PAD District I .....	4,655	3,965	9,603	18,223
Connecticut .....	0	320	0	320
Delaware .....	0	0	101	101
Florida .....	0	682	1,127	1,809
Georgia .....	0	0	24	24
Maine .....	0	207	612	819
Maryland .....	0	0	304	304
Massachusetts .....	266	366	1,841	2,473
New Hampshire .....	0	0	80	80
New Jersey .....	1,102	956	1,708	3,765
New York .....	2,761	968	2,184	5,912
North Carolina .....	0	0	162	162
Pennsylvania .....	523	418	535	1,476
Rhode Island .....	0	0	69	69
South Carolina .....	0	48	254	301
Vermont .....	4	0	(s)	4
Virginia .....	0	0	603	603
PAD District II .....	4	86	43	133
Illinois .....	0	80	0	80
Michigan .....	(s)	6	0	6
Minnesota .....	4	0	24	28
North Dakota .....	0	0	1	1
Wisconsin .....	0	0	18	18
PAD District III .....	406	281	792	1,480
Louisiana .....	0	37	0	37
Texas .....	406	245	792	1,443
PAD District IV .....	1	0	1	2
Montana .....	1	0	1	2
PAD District V .....	10	288	148	445
California .....	0	0	6	6
Hawaii .....	10	281	142	433
Washington .....	0	7	0	7
All PAD Districts .....	5,077	4,619	10,586	20,283

(s) = Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.





# Definitions of Petroleum Products and Other Terms

**Alcohol.** The family name of a group of organic chemical compounds composed of carbon, hydrogen, and oxygen. The series of molecules vary in chain length and are composed of a hydrocarbon plus a hydroxyl group;  $\text{CH}-(\text{CH})_n\text{-OH}$ . Alcohol includes methanol and ethanol.

**Alkylation.** A refinery process for chemically combining isoparaffin with olefin hydrocarbons. The product, alkylate, has high octane value and is blended with motor and aviation gasoline to improve the antiknock value of the fuel.

**API Gravity.** An arbitrary scale expressing the gravity or density of liquid petroleum products. The measuring scale is calibrated in terms of degrees API; it may be calculated in terms of the following formula:

$$\text{Deg API} = \frac{141.5}{\text{sp gr } 60\text{F}/60\text{F}} - 131.5$$

**Aromatics.** Hydrocarbons characterized by unsaturated ring structures of carbon atoms. Commercial petroleum aromatics are benzene, toluene, and xylene.

**Asphalt.** A dark-brown-to-black cement-like material containing bitumens as the predominant constituents, obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts. The conversion factor for asphalt is 5.5 barrels of 42 U.S. gallons per short ton.

**ASTM.** The acronym for the American Society for Testing and Materials.

**Aviation Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished aviation gasoline.

**Aviation Gasoline (Finished).** All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D910 and Military Specification MIL-G5572. Excludes blending components which will be used in blending or compounding into finished aviation gasoline.

**Barrel.** A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. gallons. This measure is used in most statistical reports. Factors for converting petroleum coke, asphalt and wax to barrels are given in the definitions for these products.

**Barrels Per Calendar Day.** See *Operable Capacity*.

**Barrels Per Stream Day.** See *Operable Capacity*.

**Bi-Metallic.** A term used to describe a type of catalyst. A catalytic process utilizing a catalyst comprised of two metals (e.g. platinum, rhenium).

**Butane.** A normally gaseous straight-chain or branch-chain hydrocarbon. ( $\text{C}_4\text{H}_{10}$ ). It is extracted from natural gas or refinery gas streams. It includes isobutane and normal butane and is covered by ASTM Specification D1835 and Gas Processors Association Specifications for commercial butane.

**Isobutane.** A normally gaseous branch-chain hydrocarbon, ( $\text{C}_4\text{H}_{10}$ ). It is a colorless paraffinic gas that boils at a temperature of 10.9 degrees F. It is extracted from natural gas or refinery gas streams.

**Normal Butane.** A normally gaseous straight-chain hydrocarbon, ( $\text{C}_4\text{H}_{10}$ ). It is a colorless paraffinic gas that boils at a temperature of 31.1 degrees F. It is extracted from natural gas or refinery gas streams.

**Butylene.** An olefinic hydrocarbon, ( $\text{C}_4\text{H}_8$ ), recovered from refinery processes.

**Catalytic Cracking.** The refining process of breaking down the larger, heavier, and more complex hydrocarbon molecules into simpler and lighter molecules. Catalytic cracking is accomplished by the use of a catalytic agent and is an effective process for increasing the yield of gasoline from crude oil.

**Catalytic Hydrocracking.** A refining process for converting middle boiling or residual material to high-octane gasoline, reformer charge stock, jet fuel and/or high grade fuel oil. Hydrocracking is an efficient, relatively low temperature process using hydrogen and a catalyst.

**Catalytic Hydrotreating.** A process for treating petroleum fractions (e.g. distillate fuel oil and residual oil) and unfinished oils (e.g. naphthas, reformer feeds and heavy gas oils) in the presence of catalysts and substantial quantities of hydrogen to upgrade their quality.

**Catalytic Reforming.** The use of controlled heat and pressure with catalysts to effect the rearrangement of certain hydrocarbon molecules without altering their composition appreciably; the conversion of low-octane gasoline fractions into higher octane stocks suitable for blending into finished gasoline; also the conversion of naphthas to obtain a more volatile product of higher octane number.

**Conventional.** A term used to describe a type of catalyst. A catalytic process utilizing a catalyst comprised of a metal and a non-metal (e.g. platinum, alumina).

**Coal.** A generic term applied to carbonaceous rocks that were formed by the partial or complete decomposition of vegetation. These stratified carbonaceous rocks are either solid or brittle and are highly combustible. In-

cludes lignite, bituminous coal, and anthracite which conform to ASTM Specification D388.

**Crude Distillation.** The refining process of separating crude oil components by heating and subsequent condensing of the fractions by cooling.

**Crude Oil** (Including Lease Condensate). A mixture of hydrocarbons that existed in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite and oil shale. Drip gases are also included, but topped crude oil (residual) oil and other unfinished oils are excluded. Liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded where identifiable. Crude oil is considered as either domestic or foreign according to the following:

**Domestic.** Crude oil produced in the United States or from its "outer continental shelf" as defined in 43 U.S.C. 1331.

**Foreign.** Crude oil produced outside the United States. Imported Athabasca hydrocarbons are included.

**Delayed Coking.** A process to produce low Conradson carbon gas oil for catalytic cracking feedstock and for gasoline.

**Distillate Fuel Oil.** A general classification for one of the petroleum fractions produced in conventional distillation operations. It is used primarily for space heating, on-and-off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation. Included are products known as No. 1, No. 2, and No. 4 fuel oils; No. 1, No. 2, and No. 4 diesel fuels.

**No. 1 Fuel Oil.** A light distillate fuel oil intended for use in vaporizing pot-type burners. ASTM Specification D396 specifies for this grade maximum distillation temperatures of 400 degrees F. at the 10-percent point and 550 degrees F. at the 90-percent point, and kinematic viscosities between 1.4 and 2.2 centistokes at 100 degrees F.

**No. 2 Fuel Oil.** A distillate fuel oil for use in atomizing-type burners for domestic heating or for moderate capacity commercial-industrial burner units. ASTM Specification D396 specifies for this grade distillation temperatures at the 90-percent point between 540 degrees and 640 degrees F., and kinematic viscosities between 2.0 and 3.6 centistokes at 100 degrees F.

**No. 1 and No. 2 Diesel Fuel Oils.** Distillate fuel oils used in compression-ignition engines, as given by ASTM Specification D975:

**No. 1-D.** A volatile distillate fuel oil with a boiling range between 300-575 degrees F. and used in high-speed diesel engines generally operated under variations in speed and load. Includes type C-B diesel fuel used for city buses and similar operations. Properties are defined in ASTM Specification D975.

**No. 2-D.** A gas oil type distillate of lower volatility with distillation temperatures at the 90-percent point between 540-640 degrees F. for use in high-speed diesel engines generally operated under uniform speed and load conditions. Includes Type R-R diesel fuel used for railroad locomotive engines, and Type T-T for diesel-engine trucks. Properties are defined in ASTM Specification D975.

**No. 4 Fuel Oil.** A fuel oil for commercial burner installations not equipped with preheating facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil and residual fuel oil stocks that conforms to ASTM Specification D396 or Federal Specification VV-F-815C; its kinematic viscosity is between 5.8 and 26.4 centistokes at 100 degrees F. Also included is No. 4-D, a fuel oil for low- and medium-speed diesel engines that conforms to ASTM Specification D975.

**Eastern Hemisphere.** That half of the earth east of the Atlantic Ocean which includes Europe, Asia, Africa and Australia. The Hawaiian Foreign Trade Zone is in this hemisphere.

**Electric Energy (Purchased).** Electricity purchased for refinery operations that is not produced within the refinery complex.

**Ethane.** A normally gaseous straight-chain hydrocarbon, (C<sub>2</sub>H<sub>6</sub>). It is a colorless paraffinic gas that boils at a temperature of -127.48 degrees F. It is extracted from natural gas and refinery gas streams.

**Ethylene.** An olefinic hydrocarbon, (C<sub>2</sub>H<sub>4</sub>), recovered from refinery processes or petrochemical processes.

**Field Production.** Represents crude oil production on leases, natural gas liquids production at natural gas processing plants, and new supply of other hydrocarbons and alcohol.

**Fluid Coking.** A thermal process utilizing the fluidized-solids technique for continuous conversion of heavy, low-grade oils into lighter products.

**Gasohol.** See *Motor Gasoline (Finished)*.

**Gas Oil.** A liquid petroleum distillate having a viscosity intermediate between that of kerosene and lubricating oil. Derives its name from having originally been used in the manufacture of illuminating gas. Now supplies distillate-type fuel oils and diesel fuel, also cracked to produce gasoline.

**Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished aviation or motor gasoline.

**Idle Capacity.** The component of operable capacity that is not in operation and not under active repairs, but capable of being placed in operation within 30 days; and capacity not in operation but under active repairs that can be completed within 90 days.

**Imported Crude Oil Burned As Fuel.** The amount of foreign crude oil burned as a fuel oil, usually as residual fuel oil, without being processed as such. Imported

**Crude oil** burned as fuel includes lease condensate and liquid hydrocarbons produced from tar sand oil, gilsonite, and shale oil.

**Isobutane.** See *Butane*.

**Isomerization.** A refining process which alters the fundamental arrangement of atoms in the molecule. Used to convert normal butane into isobutane, an alkylation process feedstock, and normal pentane and hexane into isopentane and isohexane, high-octane gasoline components.

**Kerosene.** A petroleum distillate that boils at a temperature between 300-550 degrees F., that has a flash point higher than 100 degrees F. by ASTM Method D56, that has a gravity range from 40-46 degrees API, and that has a burning point in the range of 150-175 degrees F. Included are the two classifications recognized by ASTM D3699: No. 1-K and No. 2-K, and all grades of kerosene called range or stove oil which have properties similar to No. 1 fuel oil, but with a gravity of about 43 degrees API and a maximum end-point of 625 degrees F. Kerosene is used in space heaters, cook stoves, and water heaters and is suitable for use as an illuminant when burned in wick lamps.

**Kerosene-Type Jet Fuel.** A quality kerosene product with an average gravity of 40.7 degrees API, and a 10 percent distillation temperature of 400 degrees F. It is covered by ASTM Specification D1655 and Military Specification MIL-T-5624L (Grades JP-5 and JP-8). A relatively low-freezing point distillate of the kerosene type; it is used primarily for commercial turbojet and turboprop aircraft engines.

**Lease Condensate.** A natural gas liquid recovered from gas well gas (associated and nonassociated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

**Liquefied Petroleum Gases (LPG).** Ethane, Ethylene, propane, propylene, normal butane, butylene, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate raw natural gas plant liquids.

**Liquefied Refinery Gases (LRG).** Liquefied petroleum gases fractionated from refinery or still gases. Through compression and/or refrigeration they are retained in the liquid state. The reported categories are ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane. Excludes still gas used for chemical or rubber manufacture which is reported as a petrochemical feedstock and also excludes liquefied petroleum gases intended for blending into gasoline which are reported as gasoline blending components. Liquefied refinery gases are reported for use as petrochemical feedstock or other uses.

**Lubricating Oils.** A substance used to reduce friction between bearing surfaces. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. "Lubricants" includes all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. The three categories include:

**Bright Stock.** A refined, high viscosity lubricating oil base stock that is usually made from a residuum by a treatment such as deasphalting, acid treatment, or solvent extraction.

**Neutral.** A distillate lubricating oil base stock with a viscosity that is usually not above 550 Saybolt Universal Seconds (SUS) at 100 degrees F. It is prepared by a treatment such as hydrofining, acid treatment, or solvent extraction.

**Other.** A lubricating oil base stock used in finished lubricating oils and greases, including black, coastal, and red oils.

**Middle Distillates.** A general classification that includes distillate fuel oil and kerosene.

**Miscellaneous Products.** Includes all finished products not classified elsewhere, e.g., petrolatum, absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, specialty oils and medicinal oils.

**Motor Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished motor gasoline. Pool gasoline is included in this category.

**Motor Gasoline (Finished).** A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition engines. Specifications for motor gasoline, as given in ASTM Specification D439 or Federal Specification VV-G-1690B, include a boiling range of 122-158 degrees F. at the 10-percent point to 365-374 degrees F. at the 90-percent point and a Reid vapor pressure range from 9 to 15 psi. "Motor gasoline" includes finished leaded gasoline, finished unleaded gasoline, and gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Finished Leaded Gasoline.** Contains more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon. The actual lead content of any given gallon, however, may vary as a function of the size of the producer and company according to specific Environmental Protection Agency waiver provisions. Premium and regular grades are included, depending on the octane rating. Includes leaded gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Finished Unleaded Gasoline.** Contains not more than 0.05 gram of lead per gallon and not more than 0.005 gram of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating. Includes unleaded gasohol. Blend stock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Gasohol.** A blend of finished motor gasoline (leaded or unleaded) and alcohol (generally ethanol but sometimes methanol) in which 10 percent or more of the product is alcohol.

**Naphtha-Type Jet Fuel.** A fuel in the heavy naphtha boiling range with an average gravity of 52.8 degrees API and 20 to 90 percent distillation temperatures of 290 degrees to 470 degrees F, meeting Military Specification MIL-T-5624L (Grade JP-4). JP-4 is used for turbojet and turboprop aircraft engines, primarily by the military. Excludes ram-jet and petroleum rocket fuels.

**Natural Gas.** A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

**Natural Gas Field Facility.** A field facility designed to process natural gas produced from more than one lease for the purpose of recovering condensate from a stream of natural gas; however, some field facilities are designed to recover propane, normal butane, pentanes plus, etc., and to control the quality of natural gas to be marketed.

**Natural Gas Plant Liquids.** Natural gas liquids recovered from natural gas in gas processing plants, and in some situations, from natural gas field facilities. Natural gas liquids extracted by fractionators are also included. These liquids are defined according to the published specification of the Gas Processors Association and the American Society for Testing and Materials and are classified as follows: Ethane, propane, normal butane, isobutane, pentanes plus, and other products from natural gas processing plants (i.e. products meeting the standards for finished petroleum products produced at natural gas processing plants, such as finished motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

**Natural Gasoline and Isopentane.** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas, that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Processors Association. Includes isopentane which is a saturated branch-chain hydrocarbon, (C<sub>5</sub>H<sub>12</sub>), obtained by fractionation of natural gasoline or isomerization of normal pentane.

**Normal Butane.** See *Butane*.

**OPEC.** The acronym for the Organization of Petroleum Exporting Countries, oil-producing and exporting countries that have organized for the purpose of negotiating with oil companies on matters of oil production, prices and future concession rights. Current members are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

**Operable Capacity.** The amount of capacity that, at the beginning of the period, is in operation; not in operation, and not under active repairs but capable of being placed in operation within 30 days; or not in operation but under active repairs that can be completed within 90 days. Operable capacity is the sum of the operating and idle capacity and is measured in barrels per calendar day or barrels per stream day.

**Barrels Per Calendar Day.** The maximum number of barrels of input that can be processed in an atmos-

pheric distillation facility during a twenty-four hour period after making allowances for the following limitations:

The capability of downstream facilities to absorb the output of crude oil processing facilities of a given refinery. No reduction is made when a planned distribution of intermediate streams through other than downstream facilities is part of a refinery's normal operation.

The types and grades of inputs to be processed.

The types and grades of products expected to be manufactured.

The environmental constraints associated with refinery operations.

The reduction of capacity for scheduled downtime such as routine inspection, mechanical problems, maintenance, repairs and turnaround.

The reduction of capacity for unscheduled downtime such as mechanical problems, repairs, and slowdowns.

**Barrels Per Stream Day.** The amount a unit can process running at full capacity under optimal crude and product slate conditions.

**Operating Capacity.** The component of operable capacity that is in operation at the beginning of the period.

**Other Hydrocarbons.** Materials received by a refinery and consumed as raw materials. Includes hydrogen, coal tar derivatives, glisonite, and natural gas received by the refinery for reforming into hydrogen. Natural gas to be used as fuel is excluded.

**Pentanes Plus.** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas, includes isopentane, natural gasoline and plant condensate.

**Petrochemical Feedstock Use.** Chemical feedstocks derived from petroleum, principally for the manufacture of chemicals, synthetic rubber and a variety of plastics. The categories reported are "Naphtha-Less than 400 degrees F. end-point" and "Other oils over 400 degrees F. end point."

**Naphtha-Less Than 400 Degrees F. End-Point.** A naphtha with an end point of less than 400 degrees F. that is intended for use as a petrochemical feedstock.

**Other Oils-Over 400 Degrees F. End-Point.** Oils with an end point over 400 degrees F. that is intended for use as a petrochemical feedstock.

**Petroleum Coke.** A residue, the final product of the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion factor is 5 barrels of 42 U.S. gallons per short ton.

**Marketable Coke.** Those grades of coke produced in delayed or fluid cokers which may be recovered as relatively pure carbon. This "green" coke may be sold as is or further purified by calcining.



**Catalyst Coke.** In many catalytic operations (i.e., catalytic cracking) carbon is deposited on the catalyst thus, deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refinery process. This carbon or coke is not recoverable in a concentrated form.

**Petroleum Products.** Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, naphtha less than 400 F. end-point, other oils over 400 F. end-point, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Refinery.** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

**Plant Condensate.** One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquids at gas inlet separators or scrubbers in processing plants.

**Primary Stocks.** Stocks of crude oil or petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tank farms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in transit from Alaska, or that is stored on Federal leases or in the Strategic Petroleum Reserve is included. Primary Stocks excludes stocks of foreign origin that are held in bonded warehouse storage.

**Propane.** A normally gaseous straight-chain hydrocarbon, (C<sub>3</sub>H<sub>8</sub>). It is a colorless paraffinic gas that boils at a temperature of -43.67 degrees F. It is extracted from natural gas or refinery gas streams. It includes all products covered by Gas Processors Association Specifications for commercial propane and HD-5 propane and ASTM Specification D1835.

**Propylene.** An olefinic hydrocarbon, (C<sub>3</sub>H<sub>6</sub>), recovered from refinery processes or petrochemical processes.

**Residual Fuel Oil.** The topped crude of refinery operations which includes No. 5 and No. 6 fuel oils as defined in ASTM Specification D396 and Federal Specification VV-F-815C, Navy Special fuel oil as defined in Military Specification MIL-F-859E including Amendment 2 (NATO Symbol F-77), and Bunker C fuel oil. Residual fuel oil is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes. Imports of residual fuel oil include "Imported Crude Oil Burned as Fuel."

**Road Oil.** Any heavy petroleum oil, including residual asphaltic oil used as a dust palliative and surface treatment on roads and highways. It is generally produced in six grades from 0, the most liquid, to 5, the most viscous.

**Special Naphthas.** All finished products within the gasoline range that are used as paint thinners, cleaners, or solvents. These products are refined to a specified flash point and have a boiling range of 90 degrees to 220 degrees F. "Special naphthas" includes all commercial hexane and cleaning solvents conforming to ASTM Specification D1836 and D484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks are excluded.

**Steam (Purchased).** Steam, purchased for use by a refinery, that was not generated from within the refinery complex.

**Still Gas (Refinery Gas).** Any form or mixture of gas produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, normal butane, butylene, propane, propylene, etc. Still gas is reported for petrochemical feedstock use and/or refinery fuel use.

**Petrochemical Feedstock Use.** Includes all refinery streams which are used by chemical or rubber manufacturing operations for further processing, less the amount of such streams returned to the source refinery. Finished petrochemical products are not included. For example, polyethylene, butadiene, etc. are considered petrochemical products; therefore, only their feedstock equivalents are included.

**Fuel Use.** All other still gas.

**Strategic Petroleum Reserve (SPR).** Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

**Thermal Cracking.** A refining process in which heat and pressure are used to break down, rearrange, or combine hydrocarbon molecules. Thermal cracking is used to increase the yield of gasoline obtainable from crude oil.

**Unfinished Oils.** Includes all oils requiring further processing, except those requiring only mechanical blending.

**Unfractionated Streams.** Mixtures of unsegregated natural gas liquid components excluding those in plant condensate. This product is extracted from natural gas.

**Vacuum Distillation.** Distillation under reduced pressure (less than atmospheric) which lowers the boiling temperature of the liquid being distilled. This technique with its relatively low temperatures prevents cracking or decomposition of the charge stock.

**Visbreaking.** A thermal cracking process in which heavy vacuum-still bottoms produced on the primary distillation unit are cracked to increase production of distillate products.

**Wax.** A solid or semi-solid material derived from petroleum distillates or residues by such treatments as chilling, precipitating with a solvent, or de-oiling. It is light-colored, more-or-less translucent crystalline mass, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series pre-



dominates. Includes all marketable wax whether crude scale or fully refined. The three grades included are microcrystalline, crystalline-fully refined, and crystalline-other. The conversion factor is 280 pounds per 42-U.S. gallon barrel.

**Microcrystalline Wax.** Wax extracted from certain petroleum residues having a finer and less apparent crystalline structure than paraffin wax and having the following physical characteristics:

Penetration at 77 degrees F. (D1321)-60 maximum. Viscosity at 210 degrees F. in Saybolt Universal Seconds (SUS). (D88)-60 SUS (10.22 centistokes) minimum to 150 SUS (31.8 centistokes) maximum. Oil content (D721)-5 percent minimum.

**Crystalline-Fully Refined Wax.** A light-colored paraffin wax having the following characteristics:

Viscosity at 210 degrees F. (D88)-59.9 SUS (10.18 centistokes) maximum. Oil Content (D721)-0.5 percent maximum. Other + 20 color, Saybolt minimum.

**Crystalline-Other Wax.** A paraffin wax having the following characteristics:

Viscosity at 210 degrees F. (D88)-59.9 SUS (10.18 centistokes) maximum. Oil Content (D721)-0.51 percent minimum to 15 percent maximum.

**Western Hemisphere.** That half of the earth that includes North and South America and adjacent islands.

# Bureau of Mines Petroleum Refining Districts and PAD Districts

*The following are the Bureau of Mines petroleum refining districts which make up the PAD districts:*

## **PAD District I**

**East Coast:** District of Columbia and the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, and the following counties of the State of New York: Cayuga, Tompkins, Chemung and all counties east and north thereof. Also the following counties in the State of Pennsylvania: Bradford, Sullivan, Columbia, Montour, Northumberland, Dauphin, York, and all counties east thereof.

**Appalachian #1:** The State of West Virginia and those parts of the States of Pennsylvania and New York not included in the East Coast District.

## **PAD District II**

**Appalachian #2:** The following counties of the State of Ohio: Erie, Huron, Crawford, Marion, Delaware, Franklin, Pickaway, Ross, Pike, Scioto, and all counties east thereof.

**Indiana—Illinois—Kentucky:** The States of Indiana, Illinois, Kentucky, Tennessee, Michigan, and that part of the State of Ohio not included in the Appalachian District.

**Minnesota—Wisconsin—North and South Dakota:** The States of Minnesota, Wisconsin, North Dakota, and South Dakota.

**Oklahoma—Kansas—Missouri:** The States of Oklahoma, Kansas, Missouri, Nebraska, and Iowa.

## **PAD District III**

**Texas Inland:** The State of Texas except the Texas Gulf Coast District.

**Texas Gulf Coast:** The following counties of the State of Texas: Newton, Orange, Jefferson, Jasper, Tyler, Hardin, Liberty, Chambers, Polk, San Jacinto, Montgomery, Harris, Galveston, Waller, Fort Bend, Brazoria, Wharton, Matagorda, Jackson, Victoria, Calhoun, Refugio, Aransas, San Patricio, Nueces, Kleberg, Kenedy, Willacy, and Cameron.

**Louisiana Gulf Coast:** The following Parishes of the State of Louisiana: Vernon, Rapides, Avoyelles, Pointe Coupee, West Feliciana, East Feliciana, Saint Helena, Tangipahoa, Washington, and all Parishes south thereof. Also the following counties of the State of Mississippi: Pearl River, Stone, George, Hancock, Harrison, and Jackson. Also the following counties of the State of Alabama: Mobile and Baldwin.

**North Louisiana—Arkansas:** The State of Arkansas and those parts of the States of Louisiana, Mississippi, and Alabama not included in the Louisiana Gulf Coast District.

**New Mexico:** The State of New Mexico.

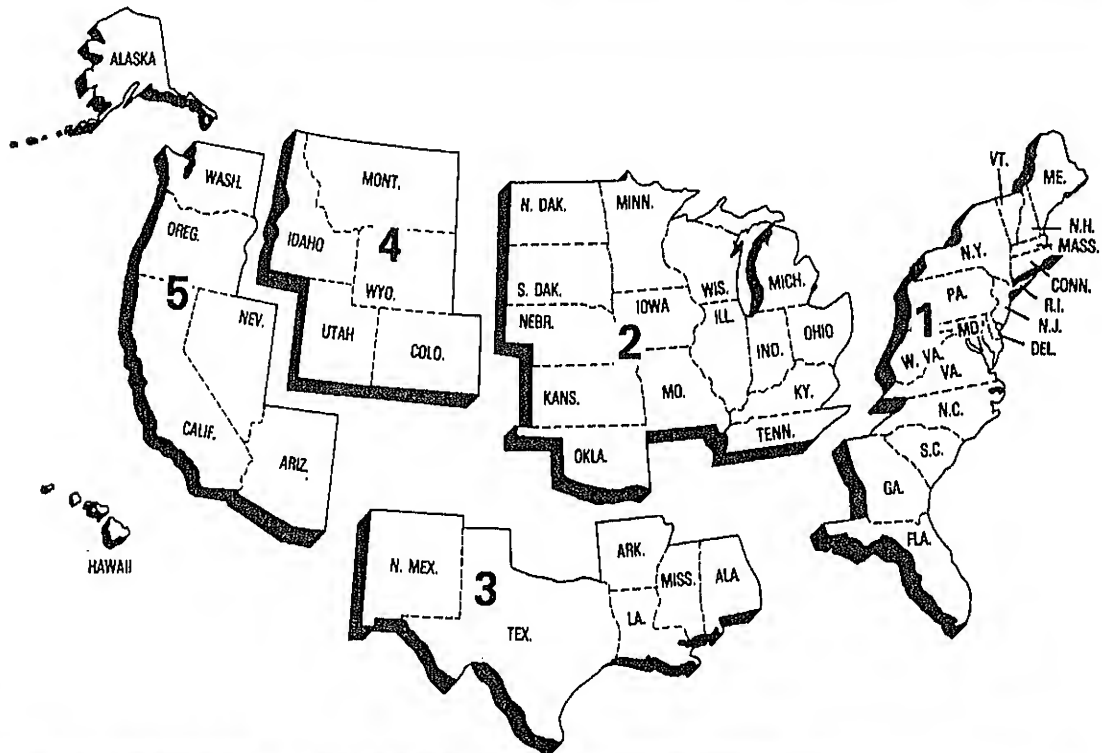
## **PAD District IV**

**Rocky Mountain:** The States of Montana, Idaho, Wyoming, Utah, and Colorado.

## **PAD District V**

**West Coast:** The States of Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii.

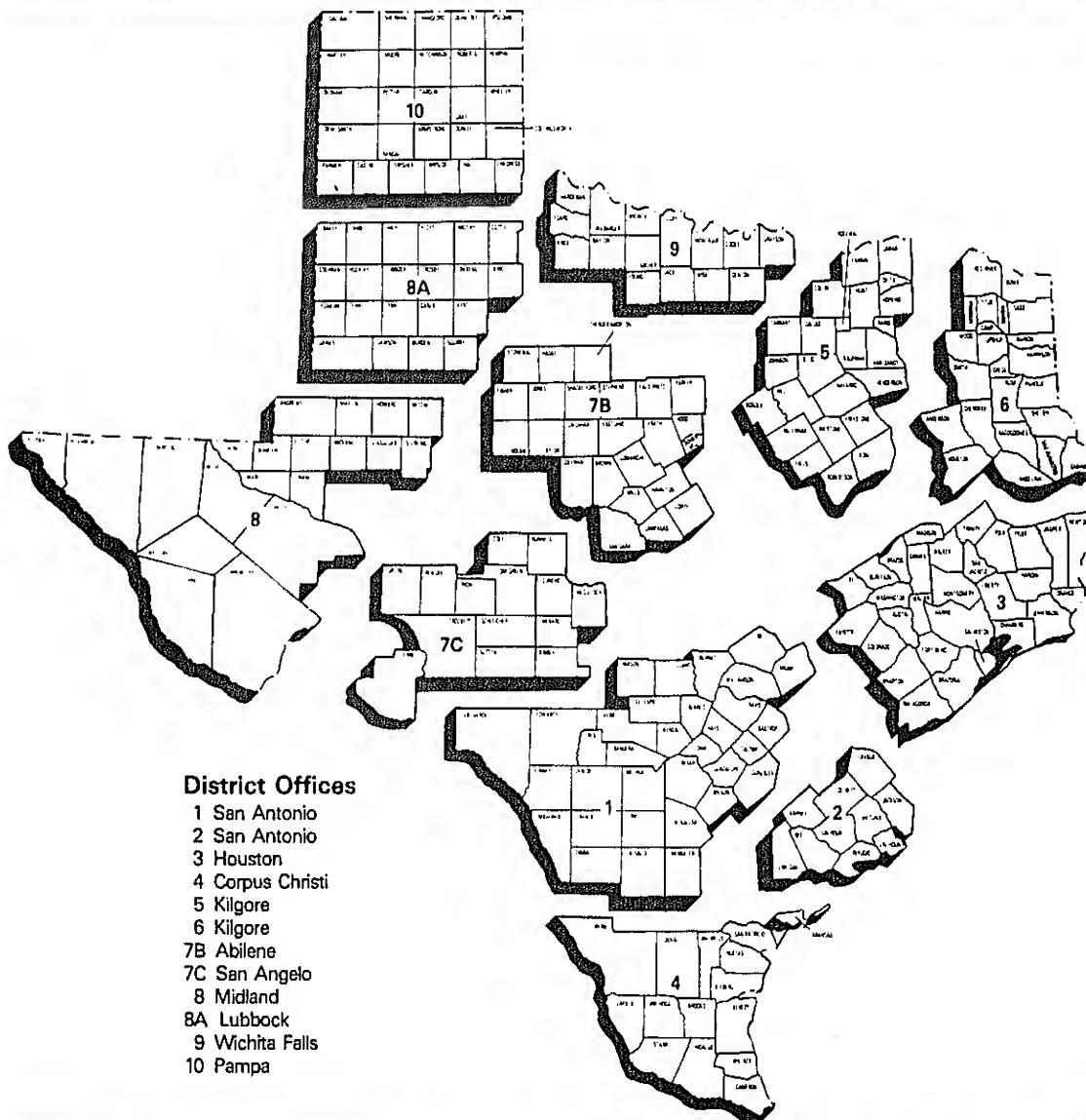
## Petroleum Administration for Defense (PAD) Districts



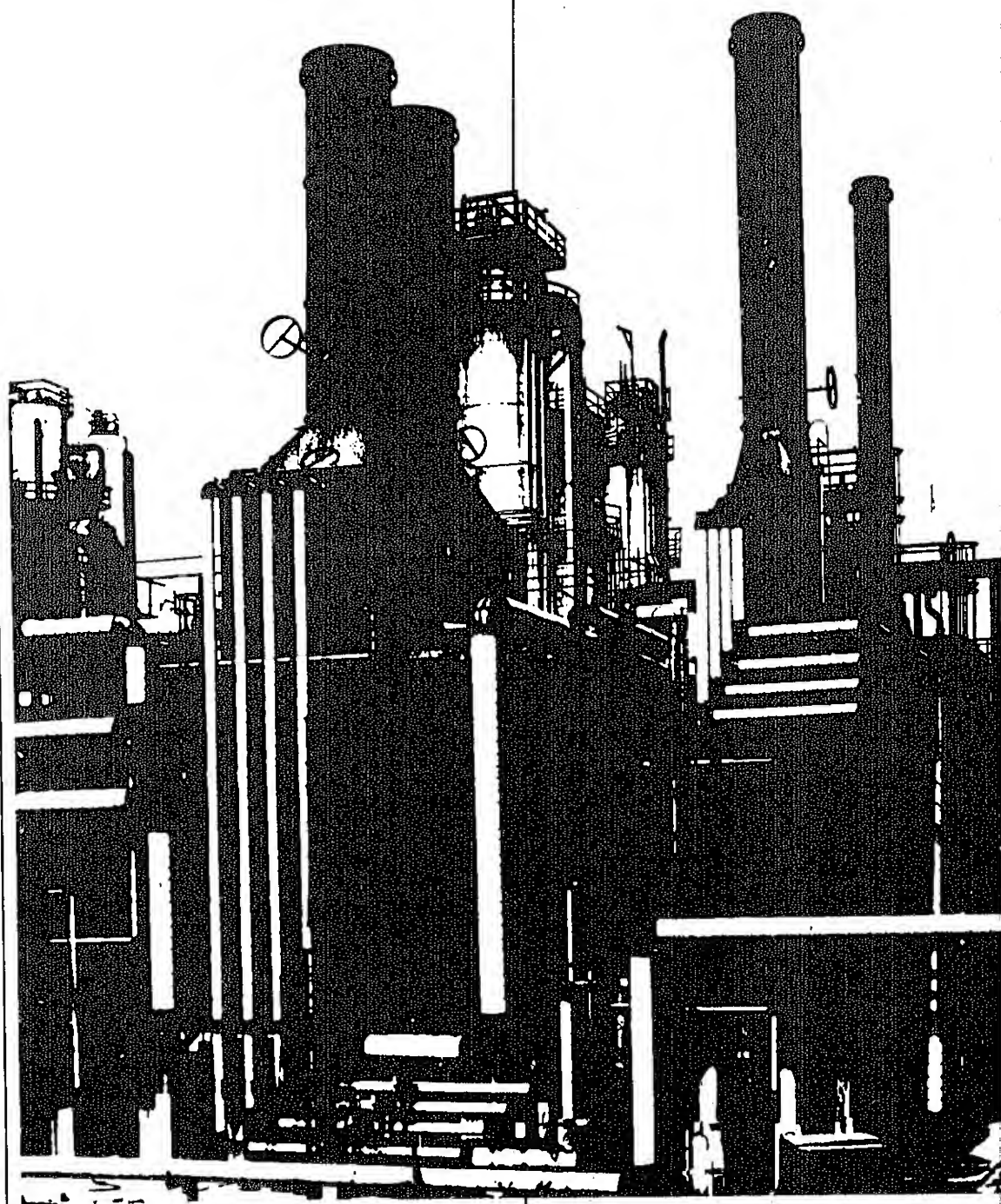
## Bureau of Mines Refining Districts



## District Map Oil and Gas Division Railroad Commission of Texas









# Explanatory Notes

## Note 1: Data Collection Methodology

### Background

Beginning in January 1983, the Energy Information Administration (EIA) unified its petroleum supply data collection activities into the Petroleum Supply Reporting System (PSRS). The PSRS represents a family of data collection survey forms, data processing systems and publication systems that have been consolidated to achieve comparability and consistency throughout. The primary focus of the consolidation has been to revise the weekly and monthly survey reporting forms to assure consistency in form layout, preparation instructions, and definitions. As a result, a new set of survey forms were implemented in January 1983. The following are the new form numbers and their corresponding predecessor forms:

New Form Number	Name	Old Form Number
EIA-800	Weekly Refinery Report	EIA-161
EIA-801	Weekly Bulk Terminal Report	EIA-162
EIA-802	Weekly Product Pipeline Report	EIA-163
EIA-803	Weekly Crude Oil Stocks Report	EIA-164
EIA-804	Weekly Imports Report	EIA-165
EIA-805	Weekly Shipments from Puerto Rico to the United States Report	—
EIA-810	Monthly Refinery Report	EIA-87
EIA-811	Monthly Bulk Terminal Report	EIA-88
EIA-812	Monthly Product Pipeline Report	EIA-89
EIA-813	Monthly Crude Oil Report	EIA-90
ERA-60	Monthly Imports Report	ERA-60
EIA-815	Monthly Shipments from Puerto Rico to the United States Report	FEA-P133-M-0
EIA-816	Monthly Natural Gas Liquids Report	EIA-64
EIA-817	Monthly Tanker and Barge Movement Report	EIA-170

Forms EIA-800 through 805 comprise the Weekly Petroleum Supply Reporting System (WPSRS). This system is designed to collect basic refinery operations and product stock data for major products on a weekly basis. Data from the WPSRS are published in the *Weekly Petroleum Status Report (WPSR)* and are also used to calculate the preliminary statistics in the "Summary Statistics" section of the *Petroleum Supply Monthly*

(PSM). A description of the WPSRS survey forms follows in Note 1.1.

Forms EIA-810-813, 815-817 and ERA-60 comprise the Monthly Petroleum Supply Reporting System (MPSRS). These surveys collect detailed refinery operations data, refinery, bulk terminal and pipeline stocks data, crude oil and petroleum product imports data and movements of petroleum products and crude oil between PAD Districts data. These surveys are the primary source of data for the "Summary Statistics" and "Detailed Statistics" sections of the PSM. A description of MPSRS survey forms follows in Note 1.2.

Data are also obtained in magnetic tape form from the Bureau of the Census on a monthly basis. These tapes contain aggregated import and export statistics that are used in the preparation of the PSM. A description of the Census data follows in Note 1.3.

## Note 1.1: Weekly Petroleum Supply Reporting System (WPSRS)

### Background

The EIA first began publishing weekly petroleum supply statistics in April 1979 in response to the Iranian oil crisis. Initially, the published data were taken from the American Petroleum Institute (API) *Weekly Statistical Bulletin*. However, in January 1980 the EIA began to publish weekly statistics from its own surveys, with the exception of imports statistics which the EIA did not begin collecting until June 1980.

The weekly surveys collect data comparable to those collected on a monthly basis. Selected petroleum companies report weekly data to the EIA on crude oil and petroleum product stocks, refinery inputs and production, and crude oil and petroleum product imports. On Forms EIA-800 through EIA-803, companies report data on a custody basis. On the Form EIA-804, the importer of record reports each shipment entering the United States. On Form EIA-805, a company shipping unfinished oils and finished petroleum products into the United States from Puerto Rico reports each shipment. Current weekly data and the most recent monthly data are used to estimate the totals that are published in the *Weekly Petroleum Status Report*.

### Sample Frame

The sample of companies that report weekly is selected from the universe of companies that report on the comparable monthly surveys. Sampled companies report data only for facilities in the 50 States and District of Columbia.

The sample for each survey is taken from the following universe:

**EIA-800:** Based on the EIA-810 universe, which includes all petroleum refineries in the United States and



its territories, industrial facilities that have crude oil distillation capacity and produce some refined petroleum products, and plants that produce finished motor gasoline through mechanical blending. The selected sample size is 215.

**EIA-801:** Based on the EIA-811 universe, which includes all bulk terminal facilities in the United States and its territories that have either a total bulk storage capacity of 50,000 barrels or more, or that receive petroleum products by tanker, barge, or pipeline. The selected sample size is 93.

**EIA-802:** Based on the EIA-812 universe, which includes all petroleum product pipeline companies in the United States and its territories that transport refined petroleum products, including interstate, intrastate and intracompany pipeline movements. Pipeline companies that transport only natural gas liquids are not included in the EIA-802 frame. Only those pipeline companies that transport products covered in the weekly survey are included. The selected sample size is 65.

**EIA-803:** Based on the EIA-813 universe, which consists of all companies which carry or store crude oil of 1,000 barrels or more in the 50 States, and the District of Columbia. Included are gathering and trunk pipeline companies (including interstate, intrastate, and intracompany pipelines), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water.

**EIA-804:** Based on the ERA-60 universe, which includes all Importers of record of crude oil and petroleum products into the United States and Puerto Rico. The selected sample size is 65.

**EIA-805:** Based on the EIA-815 universe, which includes all shippers of unfinished oils and petroleum products into the United States from Puerto Rico. Four companies report.

### Sampling Method

The cut-off method is the sampling procedure used for all weekly surveys except the EIA-802, which uses the monthly universe in its entirety. In the cut-off method, companies are ranked from largest to smallest on the basis of the quantities reported during some previous 12-month period. Companies are chosen for the sampling, beginning with the largest and adding companies until the total sample covers 90 percent of the total for the previous time period for each product published in the *Weekly Petroleum Status Report*.

### Collection Methods

Data are collected by mail, mailgram, telephone, Telex, and Telefax on a weekly basis. The report period closes each Friday at 7 a.m. All canvassed firms and terminal operations companies must file by 5 p.m. on the following Monday.

### Estimation and Imputation

After company reports have been checked and entered into the weekly data base, weekly totals for given products are estimated by using the following formula.

The total reported by all companies for the most recent month ( $M_t$ ) is divided by the amount reported by the sample of companies for the most recent month ( $M_s$ ). The result is multiplied by the amount reported by the sample of companies for the current week ( $W_s$ ). The answer,  $W_t$ , is an estimate of the amount that would have been reported by all companies for the current week if all companies reported each week.

$$W_t = \frac{M_t}{M_s} (W_s)$$

This procedure is used to estimate total weekly inputs to refineries and production.

To estimate stocks of finished products, the preceding procedure is followed separately for refineries, bulk terminals, and pipelines. Total estimates are formed by summing over establishment types.

Weekly imports data are highly variable on a company-by-company basis or a week-by-week basis. Therefore, an exponentially smoothed ratio has been developed. The estimate of weekly imports is the sum of the smoothed ratio multiplied by the weekly values and estimates for shipments from Puerto Rico. Imports of other oils includes an adjustment from Census data for unlicensed products because of coverage differences between the monthly imports data and Census data.

Explicit Imputation is done for companies which do not respond in a given week. The imputed values are exponentially smoothed means of recent reports from the specific company.

### Response Rates

The response rate for the published estimates is usually between 95 and 98 percent.

## Note 1.2: Monthly Petroleum Supply Reporting System (MPSRS)

### Background

The MPSRS was implemented in January 1983 as the result of an extensive effort to integrate the collection and processing of petroleum supply data that have been collected on other survey forms for many years. The collection of monthly petroleum supply statistics began as early as 1918 when the Bureau of Mines (BOM) began collecting data on refinery operations and crude oil stocks and movements. The collection systems

were further expanded to include natural gas plant liquids production and storage in 1925, imports of crude oil and petroleum products and storage and movements of petroleum products in 1959, and tanker and barge movements of crude oil and petroleum products in 1964. Since their inception, each survey has undergone numerous changes, but the MPSRS is the first effort to make them all consistent and comparable.

## Respondent Frame

**EIA-810:** All petroleum refineries and plants that produce finished motor gasoline through the mechanical blending of liquids which are operated or controlled in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, the Hawaiian Foreign Trade Zone, and Guam. Approximately 313 respondents report on the EIA-810.

**EIA-811:** All bulk terminal facilities in the 50 States and the District of Columbia, Puerto Rico, and the Virgin Islands that (a) have a total bulk storage capacity of 50,000 barrels or more and/or (b) receive petroleum products by tanker, barge, or pipeline, regardless of ownership of the material. Approximately 328 respondents report on the EIA-811.

**EIA-812:** All products pipeline companies that carry petroleum products (including interstate, intrastate and intracompany pipelines) in the 50 States and the District of Columbia. Approximately 94 respondents report on the EIA-812.

**EIA-813:** All companies which carry or store crude oil of 1,000 barrels or more in the 50 States, and the District of Columbia. Included are gathering and trunk pipeline companies (including interstate, intrastate, and intracompany pipelines), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water.

**EIA-815:** All licensed importers and importers of record shipping petroleum products from Puerto Rico into the 50 States and the District of Columbia.

Import data from the ERA-60 and EIA-815 are integrated into the import statistics reported in the PSM.

**EIA-816:** All operators of facilities designed to extract liquid hydrocarbons from natural gas stream (natural gas processing plants) or to separate a hydrocarbon stream into its component products, i.e., propane, butane, natural gasoline, etc. (fractionators). Approximately 990 respondents report on the EIA-816.

**EIA-817:** All known companies and plants that have custody of crude oil and petroleum products transported by tanker and barge between PAD Districts or between PAD Districts and the Panama Canal. There are about 50 respondents.

**ERA-60:** All licensed importers and importers of record importing crude oil and petroleum products into the

United States and Puerto Rico. The respondent universe consisted of approximately 1,100 firms as of July 31, 1982. However, only a selected 250 importers must report each month regardless of import activity. All others must report only for a month in which they actually had imports. The respondent universe for this survey is updated whenever an import license is granted by the Office of Oil Imports of the ERA.

EIA utilizes a number of sources and methods to maintain the survey respondent lists. On a regular basis, survey managers review industry publications such as the *Oil and Gas Journal* and *LP Gas Almanac* for information on facilities or companies going into operation or closing down. These are augmented by articles in newspapers, letters from respondents indicating changes in status and information received from survey systems operated by other offices.

Periodically an extensive survey study is conducted to completely refresh the frames. This involves consolidating information from every known source including State agencies, federal agencies (e.g., EPA, Corps of Engineers, Census Bureau, etc.), and private industry directories. The effort also includes the evaluation of the impact of potential frame changes on the historical time series of data published from these respondents. The results of this frame study are usually implemented in January to provide a full year under the same frame.

## Collection Methods

The data for all of the MPSRS surveys are collected monthly. Completed forms are required to be postmarked by the 20th day following the end of the report month, with the exception of the EIA-815 and ERA-60 which are due 15 work days following the end of the report month. Telephone follow-up calls are made to nonrespondents prior to the publication deadline, for their data. An automated mailing list is maintained and is used to monitor receipt of the forms.

## Imputing Missing Data

Imputation is performed only for nonresponding companies that submitted reports the previous month. For such companies, previous monthly values are used for current values. The previous month's ending stocks value is used for both the current month's beginning stocks and the current month's ending stocks. In the event that the previous month's data were estimated, the respondent is contacted and requested to submit estimates. If necessary, to be followed by submission of actual data. Data for nonrespondents on the EIA-815 and 817, and ERA-60 are not imputed.

## Response Rates

As of the filing deadline, the response rates of the EIA-810 through EIA-813 respondents is over 90 per-

cent. The response rate for the EIA-816 is over 85 percent and for the EIA-817 it is 98 percent. All companies that have not responded are contacted by telephone. Although data are taken by telephone to expedite processing, a certified submission is still required. Names of companies that fail to file for 2 consecutive months are forwarded for further noncompliance action.

In July 1983, the ERA-60 survey had a response rate of 99.9 percent by the filing deadline. The universe was 1,100 firms at that time. (Because this is a dynamic survey, the universe is constantly changing.) Standard follow-up of nonrespondents is made to insure that all reports are received, since data are not imputed for nonrespondents. In addition, response is cross-checked with response on the Petroleum Licensing Decrementation System (PLDS), a listing of each month's importers. The response rate is generally 98 to 99 percent by the time the data are first published.

### **Note 1.3: Census Import (IM-145) and Export (EM-522 and EM-594) Data**

#### **Background**

Each month the EIA purchases magnetic tapes of aggregated import and export statistics from the Bureau of the Census. These data provide the only source of export statistics and are used to augment the import data collected by the EIA. Export statistics and import data from the Census tapes on liquefied petroleum gases and bonded ship bunkers are published in the PSM.

#### **Import Statistics (IM-145)**

##### **Coverage**

The import statistics reflect both government and non-government imports of merchandise from foreign countries into the U.S. Customs territory (the 50 States, the District of Columbia, and Puerto Rico), without regard to whether or not a commercial transaction is involved. In general, the statistics record the physical movement of merchandise into the United States from foreign countries, with the exception of the following types of transactions that are excluded from the statistics:

1. Merchandise in-transit through the United States, when documented with Customs as an in-transit movement.
2. Shipments from anywhere to U.S. possessions and shipments from U.S. possessions to the United States. (U.S. possessions include Puerto Rico, the Virgin Islands, Guam, and American Samoa.)
3. U.S. merchandise that was held in foreign countries by the U.S. Armed Forces and is returned to the United States for the use of the Armed Forces.

#### **Source of Import Information**

The official U.S. import statistics are compiled by the Bureau of the Census from copies of the import entry and warehouse withdrawal forms that importers are required by law to file with Customs officials (Customs Forms 7501, 7505, and 7506).

Imported petroleum is reported as *Imports for Consumption*. Imports for consumption are a combination of entries for immediate consumption and withdrawals from warehouses for consumption. With certain exceptions as indicated above, these data generally reflect the total of commodities entered into U.S. consumption channels.

#### **Country and Area of Origin**

The country reported in the statistics as the country of origin is defined as the country where the merchandise was grown, mined, or manufactured. In instances where the country of origin cannot be determined, the transactions are credited to the country of shipment.

#### **Export Statistics (EM-522 and EM-594)**

##### **Coverage**

The export statistics reflect both government and non-government exports of domestic and foreign merchandise from the U.S. Customs territory (the 50 States, the District of Columbia, and Puerto Rico) to foreign countries, without regard to whether or not the exportation involves a commercial transaction. In general, the statistics record the physical movement of merchandise out of the United States to foreign countries, with the exception of the following types of transactions:

1. All shipments from U.S. possessions, regardless of whether the shipments are sent to the United States, to other U.S. possessions, or to foreign countries.
2. Merchandise shipped in transit through the United States from one foreign country to another, when documented as such with U.S. Customs.
3. Bunker fuels and other supplies and equipment for use on departing vessels, planes, or other carriers engaged in foreign trade.

#### **Source of Export Information**

The official U.S. export statistics are compiled by the Bureau of the Census primarily from copies of Shipper's Export Declarations. Exporters are required to file Shipper's Export Declarations with Customs officials. The only exceptions are those exporters who have been authorized to submit data directly to the Bureau of Census on magnetic tape, punched cards, or monthly Shipper's Summary Export Declarations.

## Country and Area of Destination

The country of destination is defined as the country of ultimate destination or the country where the goods are to be consumed, further processed, or manufactured, as known to the shipper at the time of exportation. If the shipper does not know the country of ultimate destination, the shipment is credited to the last country to which the shipper knows that the merchandise will be shipped in the same form as it was when exported.

## Note 2: Supply

The components of petroleum supply are field production, refinery production, imports, and stock withdrawal or addition:

**Field Production** is the sum of crude oil production (including lease condensate), natural gas processing plant production, and new supply (field production) of other liquids used by refineries.

Crude oil production is estimated based on data received from State conservation and revenue agencies. For further explanation, see Explanatory Note 3.

Field production of natural gas plant liquids (NGPL), including finished petroleum products, is reported monthly on survey Form EIA-816, *Monthly Natural Gas Liquids Report*. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. For survey description and other detail, see Explanatory Note 1.2.

**Refinery Production** of petroleum products is reported monthly on survey Form EIA-810, *Monthly Refinery Report*. Published production of these products equals refinery production minus refinery input. Refinery production of unfinished oils and of motor and aviation gasoline blending components appears on a net basis under refinery input. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month.

**Imports** of crude oil and petroleum products are reported monthly on Form ERA-60, *Report of Oil Imports into the United States and Puerto Rico*, and Form EIA-815, *Shipments of Refined Products (Including Unfinished Oils) from Puerto Rico to the United States*. In addition, the Census Bureau Tabulation IM-145 summarizes import data from Customs import declarations reported on Customs Forms 7501, 7505, and 7506. The most prominent difference between the EIA and Census systems appears in imports of liquefied petroleum

gases (LPG), where the Census data show a much higher level of imports than EIA data. This occurs because the ERA-60 respondent frame was built by monitoring importers of licensed products and LPGs are not licensed products. Therefore, respondents that import only LPGs have not been identified, and do not report these imports to the Department of Energy. Since these importers are required to file form 7501 with the U.S. Customs Service, EIA obtains data on imports of LPGs from Census Tabulation IM-145. Additional data taken from the IM-145 are relatively small quantities of naphtha- and kerosene-type jet fuels, distillate fuel oils, and residual fuel oils withdrawn from bonded storage for use in international trade. Even though these duty-free fuels are stored on United States shores, they did not enter the United States for domestic consumption and therefore are not included in the ERA-60 reporting system.

**Stock Withdrawal (+) or Addition (-)** is calculated by subtracting stocks at the end of the month from stocks at the beginning of the same month. (Note: The beginning stocks of one month are equal to the ending stocks of the previous month.) A positive result (+) would represent a withdrawal from stocks and an increase in petroleum supplies distributed for domestic consumption. A negative result (-) would represent a buildup of stocks and a reduction in the amount of petroleum supplies distributed for domestic consumption. For a description of survey forms used to make stock withdrawal or addition calculations see Explanatory Note 5.

**Unaccounted-for Crude Oil** is a balancing item that represents the difference between crude oil supply and disposition.

Crude oil supply is the sum of field production, imports and stock withdrawals or additions. Crude oil disposition is the sum of exports, refinery input, losses and product supplied. Unaccounted-for crude oil is calculated by subtracting crude oil supplies from crude oil disposition. A positive result indicates that refiners and exporters reported use of more crude oil than was reported to have been available to them. (This occurs, for example, when imports are undercounted due to late reporting or other problems.) A negative result would indicate that more crude oil was reported to have been supplied to refiners and exporters than they reported used.

## Note 3: Domestic Crude Oil Production

Data for the Crude Oil Production System (COPS) are reported to the Department of Energy by each of the State conservation agencies, which collect crude oil production values for tax purposes. The U.S. Geological Survey reports the volume of crude oil that is produced offshore in Federally-owned waters. With the exception of ten State conservation agencies, all of these reports are received monthly. After each calendar year, these monthly numbers are updated using the annual reports

from the State conservation agencies and the U.S. Geological Survey. The ten States that do not report monthly values are Indiana, Kentucky, Missouri, Arkansas, Utah, New York, Ohio, Pennsylvania, West Virginia, and Wyoming. Monthly values are estimated for these States using the individual linear trends of their historical annual crude oil production values.

There is a time lag of approximately 4 months between the end of the reporting month and the time when the monthly COPS information becomes available. Table 11 of this publication provides information on crude oil production for the most recent month for which COPS values are available. In order to present more timely crude oil production values, the EIA's Dallas Field Office prepares a series of State level estimates which are based on historical production patterns and are summed to obtain the monthly crude oil production values shown in the summary statistics of this publication.

The individual State level estimates are either exponential curve fitted projections based on recent data or are constant level projections based on the average production rate during a recent time period. In some cases, adjustments are made to these estimates based on additional information on expected changes in production rates supplied by a State agency, a trade association, or an individual field operator.

#### Note 4: Disposition

The components of petroleum disposition are crude oil losses, refinery inputs, exports, and products supplied for domestic consumption.

**Crude Oil Losses** is the sum of crude oil losses at refineries. Crude oil losses at refineries are reported on Form EIA-810, *Refinery Report*.

**Refinery Inputs** of crude oil, natural gas plant liquids, and other liquids are reported monthly on survey Form EIA-810, *Monthly Refinery Report*. Published inputs of unfinished oils and of motor and aviation gasoline blending components equal refinery input minus refinery output. Refinery inputs of finished petroleum products are reported on a net basis under refinery production.

**Exports** of crude oil and petroleum products are compiled from Census Bureau tabulations EM-522 and EM-594. Exports include crude oil shipments to Puerto Rico, the Virgin Islands, and the Hawaiian Foreign Trade Zone, which are obtained from refinery receipts reported on Form EIA-810, by refineries located in these places.

**Product Supplied** for each product is calculated by summing field production plus refinery production, plus imports, plus stock withdrawal or minus stock addition, minus crude oil losses (plus net receipts when calculated on a PAD District basis), minus re-

finery input, minus exports. This formula ensures that total disposition equals total supply.

**Products supplied** indicates those quantities of petroleum products supplied for domestic consumption. Occasionally, the result for a product is negative because total disposition of that product exceeds total supply. Negative product supplied may occur for a number of reasons: (1) product reclassification has not been reported, (2) data were misreported or reported late, (3) in the case of calculations on a PAD District basis, the figure for net receipts was inaccurate because the coverage of interdistrict movements was incomplete.

**Product supplied for crude oil** is the sum of crude oil burned on leases and by pipelines as fuel oil. These data are reported on Form EIA-813, *Monthly Crude Oil Report*. Prior to January 1983, crude oil burned on leases and by pipelines as fuel oil were reported as either distillate or residual fuel oil and included in product supplied for these products.

#### Note 5: Stocks

Primary stocks of crude oil are the sum of ending stocks reported monthly on Form EIA-810, *Monthly Refinery Report*, and on Form EIA-813, *Monthly Crude Oil Report*. Crude oil held in the Strategic Petroleum Reserve is included unless otherwise noted. Alaskan crude oil in transit is also included. Stocks of crude oil are also reported weekly on Form EIA-800, *Weekly Refinery Report*, and on Form EIA-803, *Weekly Crude Oil Stocks Report*. Primary stocks of petroleum products are summed from data reported on Form EIA-816, *Monthly Natural Gas Liquids Report*, Form EIA-810, *Monthly Refinery Report*, Form EIA-811, *Monthly Bulk Terminal Report*, and on Form EIA-812, *Monthly Product Pipeline Report*. Primary stocks of petroleum products do not include either secondary stocks held by dealers and jobbers or stocks held by consumers. Petroleum product stocks are also reported weekly on Form EIA-800, *Weekly Refinery Report*, Form EIA-801, *Weekly Bulk Terminal Report*, and Form EIA-802, *Weekly Crude Oil Stocks Report*. For survey descriptions and other details, see Explanatory Notes 1.1 - 1.3.

#### Note 6: Average Stock Levels

The graphs displaying monthly stock levels of crude oil, motor gasoline, distillate fuel oil, residual fuel oil, liquefied petroleum gases, and other products provide the user with recent data as well as a summary of data from January through December or from July through June for the most recent 3-year period. This summary takes the form of an *average range* that includes seasonal variation determined from a longer time period. The

average range represents the historical pattern; it is not a forecast.

These curves are updated semiannually (On April 1 and October 1), by basing the *average ranges* on a more recent time period. Each 3-year data series is adjusted by dropping the first 6 months and including the most recent 6 months.

For each data series, the monthly seasonal factors are estimated by means of a seasonal adjustment technique developed at the Bureau of the Census (Census X-11). The seasonal factors are assumed to be stable (i.e., unchanging from year to year) and additive. The series is deseasonalized by subtracting the seasonal factor for the appropriate month from the reported stock levels. The intent of deseasonalization is to remove only seasonal variation from the data. Thus, a deseasonalized series would contain the same trends and irregularities as the original data. For crude oil stocks, the derived seasonal factors are very small relative to crude oil stock levels. Therefore, the seasonal factors for distillate fuel oil, residual fuel oil, liquefied petroleum gases and other products are derived using monthly data from 1974-1980. For motor gasoline, the seasonal factors are based on monthly data from 1975, 1976, 1978, 1979 and 1980. In 1977, there was virtually no seasonal behavior in motor gasoline stocks. Monthly stock levels stayed at the same high level for the entire year. In addition, the seasonal patterns in 1973, 1974 and 1977 were not representative of the recent past, and these years were not used in the determination of seasonal patterns for motor gasoline stocks. Because of these differences in the year-to-year seasonal fluctuation of motor gasoline, the evidence for the illustrated seasonal patterns for crude oil, distillate fuel oil, residual fuel oil, liquefied petroleum gases and other products is stronger than is the evidence for the illustrated seasonal patterns for motor gasoline.

In some cases, these seasonal patterns do not show a smooth transition from month to month. For example, the June factor for residual fuel oil is slightly less than the May and July values, making a bump in the curve. As there is little difference in the magnitude of these seasonal factors, it is possible that this variation is due to the small number of observations (7 years) and the data variability.

After seasonal factors are derived, the most recent 3-year period (from January through December or from July through June) is deseasonalized. The average of the deseasonalized 36-month series determines the midpoint of the deseasonalized average band. The standard error of the deseasonalized 36 months is calculated adjusting for extreme data points. The width of the *average range* is twice this standard error.

The upper curve of the *average range* is defined as the average plus the seasonal factors plus the standard error. The lower curve is defined as the average plus the seasonal factors minus the standard error.

## Note 7: Movements

Movements of crude oil between PAD Districts are reported on Form EIA-817, *Monthly Tanker and Barge Movement Report*, and on Form EIA-813, *Monthly Crude Oil Report*. Petroleum product movements are reported on Forms EIA-817, *Monthly Tanker and Barge Movement Report*, and EIA-812, *Monthly Product Pipeline Report*. Net receipts is the difference between total movements into and total movements out of each PAD District by pipeline, tanker, and barge. For survey descriptions and other detail, see Explanatory Note 1.2.

## Note 8: Preliminary Monthly Statistics

Weekly data (Forms EIA-800, 801, 802, 803, and 804) are used to estimate the most recent monthly values for the *Summary Statistics* section. Since some of the weekly reporting periods overlap two adjacent months, it is necessary to use weighting factors in the calculation of the monthly values.

To estimate crude oil and petroleum product imports, crude oil input to refineries and production of petroleum products for a specific month, the weekly estimates are weighted by the number of days of that month included in each week, then summed.

End-of-month stock levels of crude oil and the major products (motor gasoline, distillate fuel oil, and residual fuel oil) are calculated in a similar manner, but use only the two weekly reporting periods that cover the end-of-week stocks before and after the end of the month. The end-of-month stock level is calculated by first calculating the stock change between the two weeks. The daily stock change between the two end-of-week stock levels is then calculated. This number is multiplied by the weighting factor of the earlier of the two weeks (the week that covers the last day of the month of interest). This change is added to the earlier of the two end-of-week stock levels to estimate the end-of-month stock level.

Preliminary monthly estimates of domestic crude oil production are calculated as described in Explanatory Note 3.

## Note 9: Notes on Tables

**Note 9.1 Crude Oil and Petroleum Products Overview** statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Crude Oil and Petroleum Products Stock Withdrawal (+) or Addition (-), Petroleum Products Supplied, Total Imports, Crude Oil Imports, Total Exports, and Crude Oil Exports appear as labeled in Table 4. Total Production and Crude Oil Production appear under Field Production in Table 4.

- Natural Gas Plant Production is the sum of Natural Gas Liquids and Finished Petroleum Products Field Production in Table 4.

- Petroleum Products Imports is the sum of Natural Gas Liquids and LRGs, Other Liquids, and Finished Petroleum Products Imports in Table 4.

- Total Crude Oil and Petroleum Products Ending Stocks appear in thousand barrels in Table 2.

**Note 9.2 Crude Oil Supply and Disposition** statistics on the referenced line appear in Table 1 of the Detailed Statistics, except where noted.

- Total Domestic Field Production, Alaskan Field Production, SPR Imports, Other Imports (synonymous with Imports Gross Excl. SPR), SPR and Other Primary Stocks Withdrawal (+) or Addition (-), Unaccounted For Crude Oil, Refinery Inputs, and Exports appear as labeled in Table 1.

- Crude Losses and Product Supplied appear as labeled in Table 4.

- SPR Ending Stocks and Other Primary Ending Stocks (synonymous with stocks excluding SPR) appear in thousand barrels in Table 1.

- Total Crude Oil Ending Stocks appear in thousand barrels in Table 2.

- Total Imports appear in Table 4.

**Note 9.3 Finished Motor Gasoline Supply and Disposition** statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Exports, and Product Supplied appear as labeled in Table 4.

- Unleaded Percent of Total Product Supplied represents the ratio of finished unleaded motor gasoline product supplied to total finished motor gasoline product supplied, multiplied by 100 and rounded to the nearest tenth.

- Ending stocks are aggregated from ending stocks in thousand barrels in Table 2.

**Note 9.4 Distillate and Residual Fuel Oil Supply and Disposition** statistics on the referenced lines appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Exports, and Product Supplied appear as labeled in Table 4.

- Ending Stocks appear in thousand barrels in Table 2.

**Note 9.5 Liquefied Petroleum Gases Supply and Disposition** statistics represent the aggregation of statistics on ethane, propane, butane, butane-propane mixtures, ethane-propane mixtures, and isobutane. The statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stocks Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied appear as labeled in Table 4.

- Ending stocks appear in thousand barrels in Table 2.

**Note 9.6 Other Petroleum Products Supply and Disposition** statistics represent the aggregation of statistics on natural gasoline, isopentane, unfractionated stream, plant condensate, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, and residual fuel oil. The statistics on the referenced line are aggregated from Table 4 of the Detailed Statistics, except where noted.

- Total Production is the aggregated sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied are aggregated from Table 4.

- Ending stocks are aggregated from ending stocks in thousand barrels in Table 2.

#### **Note 9.7 Table 1. U.S. Petroleum Balance**

- Lines (1) through (3): Crude oil (including lease condensate) production for *Alaska, Lower 48 States*, and *Total U.S.* are calculated by calling the conservation agency in Alaska for Alaskan crude oil production during the month, estimating crude oil production in the United States (see Explanatory Note 3), and taking the difference to equal production in the Lower 48 States.

- Line (5): *SPR Imports* are reported on Survey Form ERA-60.

- Line (12): *Total Other Sources* equals crude oil stock withdrawal (+) or addition (-) plus unaccounted for crude oil minus crude losses in Table 2.

- Line (14): Natural gas plant liquids (NGPL) *Production* equals field production of natural gas liquids (NGL) plus field production of finished petroleum products in Table 2.

- Line (15): *NGPL Imports* equals the sum of the im-



ports of natural gasoline and Isopentane, unfractionated stream, and plant condensate imports in Table 2.

- Line (16): *NGPL Stock Withdrawal (+) or Addition (-)* is equal to the sum of stock withdrawal (+) or addition (-) of natural gasoline and Isopentane, unfractionated stream, and plant condensate in Table 2.

- Line (17) equals the sum of lines (14), (15), and (16).

- Line (18): Unfinished oils and gasoline blending components *Stock Withdrawal (+) or Addition (-)* equals stock withdrawal (+) or addition (-) for other hydrocarbons and alcohol, for unfinished oils, motor gasoline blending components, and aviation gasoline blending components.

- Line (20): *Other Hydrocarbons and Alcohol New Supply* equals the field production of same in Table 2.

- Line (21): *Refinery Processing Gain* is a balancing item equal to total refinery production minus total refinery input in Table 2.

- Line (23): *Total Other Liquids* equals the sum of lines (18) through (22).

- Line (24): *Total Production of Products* equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and Isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and Isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; plus crude oil product supplied in Table 2.

- Line (25): *Gross Imports of Refined Products* equals imports of LPG plus imports of finished petroleum products in Table 2.

- Line (26): *Exports of Refined Products* equals exports of LPG plus exports of finished petroleum products in Table 2.

- Line (27): *Net Imports of Refined Products* equals the difference between lines (25) and (26).

- Line (28): *Total New Supply of Products* equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and Isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and Isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation

gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; minus crude oil product supplied plus imports of LPG and finished petroleum products; minus exports of LPG and finished petroleum products in Table 2.

- Line (29): *Refined Products Stocks Withdrawal (+) or Addition (-)* equals the sum of stock withdrawal (+) or addition (-) for LPG and finished petroleum products in Table 2.

- Line (30): *Total Petroleum Products Supplied for Domestic Use* equals total products supplied in Table 2.

- Lines (31) through (35) equal the respective products supplied in Table 2.

- Line (36): *Other Products Supplied* equals the sum of natural gasoline and Isopentane, unfractionated stream, plant condensate, aviation gasoline, naphtha < 400 Deg. F for petrochemical feedstock use, other oils > 400 Deg. F. for petrochemical feedstock use, special naphthas, lubricants, waxes, coke, asphalt, road oil, still gas, unfinished oils, motor gasoline blending components, aviation gasoline blending components and miscellaneous products supplied in Table 2.

- Line (37): *Total Product Supplied* is equal to total products supplied in Table 2.

- The sum of lines (38) and (39), stocks of *Crude Oil and Lease Condensate (Excluding SPR)* and stocks held by the *Strategic Petroleum Reserve*, equals ending stocks of crude oil in Table 2. SPR stocks are reported on Form EIA-813.

- Line (43): stocks of *Refined Products*, equals the sum of LPG and finished petroleum product stocks in Table 2.

## Note 10: New Stock Basis

In January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys affecting subsequent stocks reported and stock withdrawal calculations. Using the expanded coverage (new basis), the end-of-year stocks, in million barrels, would have been:

- Crude Oil: 1982 - 645 (Total) and 351 (Other Primary).

- Crude Oil and Petroleum Products: 1974 - 1,121; 1980 - 1,420; and 1982 - 1,462.

- Motor Gasoline: 1974 - 225; 1980 - 263; 1982 - 244 (Total) and 203 (Finished).



- Distillate Fuel Oil: 1974 - 224; 1980 - 205; and 1982 - 186.
- Residual Fuel Oil: 1974 - 75; 1980 - 91; and 1982 - 68.
- Liquefied Petroleum Gases: 1974 - 113; 1980 - 128; and 1982 - 103.
- Other Petroleum Products: 1974 - 220; 1980 - 249; and 1982 - 259.
- Stock withdrawal calculations beginning in 1975, 1981, 1983 were made using new basis stock levels.

In January 1984, changes were made in the reporting of natural gas liquids. As a result, unfractionated stream, which was formerly included in "Other Petroleum Products Supply and Disposition" table in the Summary Statistics, is now reported on a component basis (ethane, propane, normal butane, isobutane and pentanes plus). Most of these stocks will now appear in the "Liquefied Petroleum Gases Supply and Disposition" table of the Summary Statistics. This change will affect stocks reported and stock withdrawals in each table. Under the new basis, end-of-year 1983 stocks, in million barrels, would have been:

- Liquefied Petroleum Gases: 1983 - 108
- Other Petroleum Products: 1983 - 248

### Note 11: Stocks of Alaskan Crude Oil

Stocks of Alaskan crude oil in transit were included for the first time in January 1981. The major impact of this change is on the reporting of stock withdrawal calculations. Using the expanded coverage (new basis), 1980 end-of-year stocks, in million barrels, would have been 488 (Total) and 380 (Other Primary).

### Note 12: Changes in Petroleum Industry Reporting

Petroleum statistics contained in this report for all years through 1980 were developed using definitions, concepts, reporting procedures and aggregation methods that are consistent with those developed by the U.S. Bureau of Mines. Research conducted by the Energy Information Administration in 1979 and 1980 indicated that changes had occurred in the petroleum industry that were not being adequately reflected in EIA's reporting systems.

EIA reporting forms, definitions, and procedures were modified beginning in January 1981 to describe industry operations more accurately. Unfortunately, empirical information is not available to precisely measure the data shortcomings throughout 1980. However, estimates of the magnitudes of differences in the major data series are described below to form a basis for comparing 1979, 1980, and 1981 data.

### Motor Gasoline

Prior to 1979, the EIA product-supplied series for motor gasoline was consistently about 2 percent lower than the Federal Highway Administration (FHWA) gasoline-sales data series, which is derived from State tax receipts. This difference increased to about 4 percent in 1979 and 5 percent in 1980. There are two primary causes for this growing difference. First, refinery operations, particularly the flows of unfinished oils and the redesignation of some finished products, were not being accurately described on the EIA survey forms. Second, a large amount of gasoline was being produced away from refineries at "downstream blending stations" to take advantage of provisions in regulations governing the amount of lead that could be added. These blending stations were not reporting gasoline production to the EIA until the data system was changed in January 1981.

Quantitative estimates of the magnitude of the difference—in EIA's gasoline product supplied data in 1979 and 1980 have been made by the EIA and the American Petroleum Institute (API). The following table provides 1979 and 1980 data as published in the *Petroleum Statement Annual*, as well as EIA and API estimates of "recast" motor gasoline product supplied. EIA recast estimates were based upon preliminary monthly information in the *Monthly Petroleum Statement*. The ranges displayed in the EIA column reflect uncertainty in the estimates. Also shown are the FHWA motor gasoline sales statistics for those years. EIA has recently published a study of the quality of these FHWA data.<sup>1</sup>

<sup>1</sup>Office of Energy Information Validation, Energy Information Administration, U.S. Department of Energy, *Error Profile of the Motor Fuel Taxation Data used to Establish and Monitor State Emergency Conservation Targets* (Washington, D.C.: December, 1981).

**Finished Motor Gasoline Product Supplied on Old and New Basis  
(Thousand Barrels per Day)**

	1979				1980			
	EIA Reported	API Recast	EIA Recast	FHWA <sup>1</sup>	EIA Reported	API Recast	EIA Recast	FHWA <sup>1</sup>
Jan	6,830	7,230	7,084- 7,246	6,984	6,323	6,789	6,630- 6,791	6,672
Feb	7,254	7,496	7,389- 7,568	7,538	6,596	6,983	6,831- 7,003	6,830
Mar	7,229	7,414	7,301- 7,463	7,316	6,406	6,753	6,607- 6,768	6,713
Apr	7,055	7,300	7,187- 7,353	7,375	6,800	7,014	6,886- 7,052	6,981
May	7,213	7,429	7,313- 7,475	7,428	6,729	6,954	6,823- 6,984	7,044
Jun	7,191	7,483	7,350- 7,516	7,441	6,657	6,966	6,824- 6,991	7,049
Jul	6,902	7,241	7,105- 7,266	7,299	6,743	6,973	6,960	7,132
Aug	7,330	7,546	7,426- 7,588	7,619	6,648	6,841	6,828	7,090
Sep	6,881	7,122	7,016- 7,262	7,232	6,510	6,692	6,962	6,685
Nov	6,791	7,068	6,956- 7,122	7,142	6,234	6,507	6,516	6,951
Dec	6,730	7,106	6,966- 7,127	7,064	6,632	6,948	6,936	6,993
Average	7,034	7,302	7,183- 7,347	7,309	6,579	6,882	6,806- 6,889	6,925

<sup>1</sup>FHWA gasoline statistics published in their 1979 Table MF-33G, 08-06-80, contain aviation gasoline as well as motor gasoline. Only motor gasoline data are included in published 1980 data. Consequently, the 1979 data shown above were reduced by subtracting aviation gasoline product supplied quantities as published by EIA in the 1979 *Petroleum Statement Annual*. The 1980 FHWA data published in their 1980 Table MF-33GA, August 1981, did not require this adjustment.

### Distillate and Residual Fuel Oil

Distillate and residual fuel oil refinery production statistics through 1980 were adjusted to account for an imbalance between unfinished oil supply and disposition. The reported quantities of refinery inputs of unfinished oils typically exceed the available supply of unfinished oils. It has been assumed that this occurs when distillate and residual fuel oil produced by a refinery is shipped to another refinery, where it is treated as unfinished oil. This oil is then reprocessed rather than used or sold as distillate or residual fuel oil.

For many years (including 1980), the difference between unfinished oil disposition and supply was sub-

tracted from distillate and residual fuel oil production to adjust for this discrepancy. Two-thirds of the difference was applied to distillate, and one-third to residual fuel oil.

Beginning in January 1981 this adjustment was discontinued because there was not sufficient empirical evidence to support it. The following table presents distillate and residual fuel oil refinery production in 1980 as published (adjusted) and on the same basis as 1981 statistics are now being completed (unadjusted) to permit comparison between 1980 and 1981 data series. Adjusted distillate and residual fuel oil product supplied volumes differ from the unadjusted volumes by the same amounts as the adjusted and unadjusted production volumes.

**Adjusted and Unadjusted Refinery Production, and Unadjusted Product Supplied of Distillate and Residual Fuel Oils, by Month for 1979 and 1980 (Thousand Barrels Per Day)**

Month	Distillate Fuel Oil				Residual Fuel Oil			
	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied
Jan.	3,043	3,108	65	4,646	1,912	1,946	34	3,594
Feb.	2,888	2,945	57	4,869	1,792	1,822	30	3,625
Mar.	3,019	3,026	7	3,671	1,719	1,723	4	3,243
Apr.	2,945	2,978	32	3,048	1,639	1,656	17	2,524
May	3,066	3,093	27	3,025	1,586	1,600	14	2,517
Jun.	3,153	3,187	35	2,743	1,548	1,566	18	2,601
Jul.	3,305	3,344	38	2,601	1,575	1,594	20	2,471
Aug.	3,321	3,359	38	2,799	1,584	1,603	20	2,570
Sep.	3,354	3,306	- 48	2,599	1,627	1,602	- 25	2,584
Oct.	3,251	3,217	- 34	3,085	1,629	1,612	- 17	2,523
Nov.	3,239	3,200	- 39	3,208	1,736	1,716	- 20	2,795
Dec.	3,221	3,238	17	3,725	1,894	1,903	9	3,022
Average	3,152	3,169	16	3,327	1,687	1,695	8	2,834

1980

Month	Distillate Fuel Oil				Residual Fuel Oil			
	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied
Jan.	3,013	3,093	80	3,794	1,771	1,812	41	3,108
Feb.	2,766	2,888	122	3,834	1,773	1,836	63	3,168
Mar.	2,557	2,690	133	3,312	1,584	1,652	68	2,726
Apr.	2,460	2,554	94	2,729	1,595	1,643	48	2,492
May	2,474	2,610	136	2,538	1,509	1,579	70	2,305
Jun.	2,646	2,721	75	2,392	1,575	1,613	38	2,359
Jul.	2,689	2,783	94	2,343	1,480	1,528	48	2,339
Aug.	2,461	2,582	121	2,258	1,444	1,506	62	2,348
Sep.	2,686	2,726	40	2,627	1,495	1,516	21	2,380
Oct.	2,589	2,650	61	2,981	1,512	1,543	31	2,258
Nov.	2,703	2,823	120	3,069	1,579	1,641	62	2,513
Dec.	2,891	3,052	161	3,776	1,660	1,743	83	2,762
Average	2,661	2,764	103	2,969	1,580	1,634	54	2,562

**Total Petroleum Products**

The imbalance between the supply and disposition of unfinished oils and gasoline blending components is included with other products (line 35) in the U.S. Petroleum Balance (Table 1). These imbalances are reported as negative product supplied in the Other Liquids sec-

tion, Supply and Disposition Statistics (Table 2). Since these changes only involve redistribution of the volumes of gasoline, distillate and residual fuel oil, gasoline blending components, and unfinished oils, the total volume of petroleum products supplied remains unaffected by them.

## Note 13: NGL Import/Export Algorithms

Beginning in January 1984, the Energy Information Administration (EIA) implemented changes in the reporting of natural gas liquid (NGL) supply data, moving from a nine-product slate to a five-component slate that corresponds to industry record-keeping practices. Changes could not be made to the import and export systems. Therefore, in order to allocate imports and exports of mixed NGL streams to individual component parts, the EIA developed a statistical algorithm.

## Imports

The imports algorithm is based on information gathered from the larger importers of NGL, who were asked to provide component analyses of the products they imported during the first six months of 1983. The percentages shown in Exhibit 1 are derived from the weighted averages of the data provided by the importers.

### EXHIBIT 1. ALGORITHMS FOR ALLOCATING NGL IMPORTS

PRODUCT SLATE	Ethane	Propane	Normal butane	Isobutane	Pentanes Plus
Natural Gasoline & Isopentane (EIA-814)					100%
Plant Condensate (EIA-814)					100%
Ethane (IM-145)	100%				
Butane (IM-145)			60%	40%	
Butane-Propane Mixtures (IM-145)		40%	35%	20%	5%
Ethane-Propane Mixtures (IM-145)	80%	20%			

## Exports

The export algorithm is based on information gathered from the larger exporters of NGL, who were asked to provide component analyses of the products they

exported during 1983. The percentages shown in Exhibit 2 are derived from the weighted averages of the data provided by the exporters. It was necessary to derive percentages by PAD of exportation, due to the wide variation of components in the mixed streams.

### EXHIBIT 2. ALGORITHMS FOR ALLOCATING NGL EXPORTS

PRODUCT	P.A.D.	Ethane	Propane	EIA Component Slate Normal Butane	Isobutane	Pentanes Plus
Ethane	All	100%				
Propane	All		100%			
Butane	All			100%		
Mixed Streams	I, IV, V		40%	60%		
	II	30%	25%	15%	15%	
	III		80%	20%		



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1. The first step in the process of creating a new product is to identify a market need. This involves conducting market research to understand what consumers want and what gaps exist in the current market.

2. Once a market need is identified, the next step is to develop a concept. This involves brainstorming ideas and creating a rough sketch of the product.

3. The third step is to create a prototype. This is a physical model of the product that allows the designer to test and refine the design.

4. After the prototype is created, the next step is to conduct a feasibility study. This involves evaluating the technical, financial, and market viability of the product.

5. Once the feasibility study is complete, the next step is to develop a business plan. This document outlines the company's goals, strategies, and financial projections.

6. The final step in the process is to launch the product. This involves marketing the product, distributing it, and monitoring its performance in the market.

**COMPANY NAME OR ADDITIONAL ADDRESS LINE**

\_\_\_\_\_

STREET ADDRESS

1. *Chlorophyll a* (Chl *a*)  
 2. *Chlorophyll b* (Chl *b*)  
 3. *Chlorophyll c* (Chl *c*)  
 4. *Chlorophyll d* (Chl *d*)  
 5. *Chlorophyll e* (Chl *e*)  
 6. *Chlorophyll f* (Chl *f*)  
 7. *Chlorophyll g* (Chl *g*)  
 8. *Chlorophyll h* (Chl *h*)  
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 18. *Chlorophyll r* (Chl *r*)  
 19. *Chlorophyll s* (Chl *s*)  
 20. *Chlorophyll t* (Chl *t*)  
 21. *Chlorophyll u* (Chl *u*)  
 22. *Chlorophyll v* (Chl *v*)  
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 25. *Chlorophyll y* (Chl *y*)  
 26. *Chlorophyll z* (Chl *z*)  
 27. *Chlorophyll aa* (Chl *aa*)  
 28. *Chlorophyll ab* (Chl *ab*)  
 29. *Chlorophyll ac* (Chl *ac*)  
 30. *Chlorophyll ad* (Chl *ad*)  
 31. *Chlorophyll ae* (Chl *ae*)  
 32. *Chlorophyll af* (Chl *af*)  
 33. *Chlorophyll ag* (Chl *ag*)  
 34. *Chlorophyll ah* (Chl *ah*)  
 35. *Chlorophyll ai* (Chl *ai*)  
 36. *Chlorophyll aj* (Chl *aj*)  
 37. *Chlorophyll ak* (Chl *ak*)  
 38. *Chlorophyll al* (Chl *al*)  
 39. *Chlorophyll am* (Chl *am*)  
 40. *Chlorophyll an* (Chl *an*)  
 41. *Chlorophyll ao* (Chl *ao*)  
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 63. *Chlorophyll akz* (Chl *akz*)  
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 65. *Chlorophyll amz* (Chl *amz*)  
 66. *Chlorophyll anz* (Chl *anz*)  
 67. *Chlorophyll aoz* (Chl *aoz*)  
 68. *Chlorophyll apz* (Chl *apz*)  
 69. *Chlorophyll aqz* (Chl *aqz*)  
 70. *Chlorophyll arz* (Chl *arz*)  
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 73. *Chlorophyll auz* (Chl *auz*)  
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 75. *Chlorophyll awz* (Chl *awz*)  
 76. *Chlorophyll axz* (Chl *axz*)  
 77. *Chlorophyll ayz* (Chl *ayz*)  
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 79. *Chlorophyll azz* (Chl *azz*)  
 80. *Chlorophyll azaa* (Chl *aza*)  
 81. *Chlorophyll abz* (Chl *abz*)  
 82. *Chlorophyll acz* (Chl *acz*)  
 83. *Chlorophyll adz* (Chl *adz*)  
 84. *Chlorophyll aez* (Chl *aez*)  
 85. *Chlorophyll afz* (Chl *afz*)  
 86. *Chlorophyll agz* (Chl *agz*)  
 87. *Chlorophyll ahz* (Chl *ahz*)  
 88. *Chlorophyll aiz* (Chl *aiz*)  
 89. *Chlorophyll ajz* (Chl *ajz*)  
 90. *Chlorophyll akz* (Chl *akz*)  
 91. *Chlorophyll alz* (Chl *alz*)  
 92. *Chlorophyll amz* (Chl *amz*)  
 93. *Chlorophyll anz* (Chl *anz*)  
 94. *Chlorophyll aoz* (Chl *aoz*)  
 95. *Chlorophyll apz* (Chl *apz*)  
 96. *Chlorophyll aqz* (Chl *aqz*)  
 97. *Chlorophyll arz* (Chl *arz*)  
 98. *Chlorophyll asz* (Chl *asz*)  
 99. *Chlorophyll atz* (Chl *atz*)  
 100. *Chlorophyll auz* (Chl *auz*)  
 101. *Chlorophyll avz* (Chl *avz*)  
 102. *Chlorophyll awz* (Chl *awz*)  
 103. *Chlorophyll axz* (Chl *axz*)  
 104. *Chlorophyll ayz* (Chl *ayz*)  
 105. *Chlorophyll ayz* (Chl *ayz*)  
 106. *Chlorophyll azz* (Chl *azz*)  
 107. *Chlorophyll azaa* (Chl *aza*)  
 108. *Chlorophyll abz* (Chl *abz*)  
 109. *Chlorophyll acz* (Chl *acz*)  
 110. *Chlorophyll adz* (Chl *adz*)  
 111. *Chlorophyll aez* (Chl *aez*)  
 112. *Chlorophyll afz* (Chl *afz*)  
 113. *Chlorophyll agz* (Chl *agz*)  
 114. *Chlorophyll ahz* (Chl *ahz*)  
 115. *Chlorophyll aiz* (Chl *aiz*)  
 116. *Chlorophyll ajz* (Chl *ajz*)  
 117. *Chlorophyll akz* (Chl *akz*)  
 118. *Chlorophyll alz* (Chl *alz*)  
 119. *Chlorophyll amz* (Chl *amz*)  
 120. *Chlorophyll anz* (Chl *anz*)  
 121. *Chlorophyll aoz* (Chl *aoz*)  
 122. *Chlorophyll apz* (Chl *apz*)  
 123. *Chlorophyll aqz* (Chl *aqz*)  
 124. *Chlorophyll arz* (Chl *arz*)  
 125. *Chlorophyll asz* (Chl *asz*)  
 126. *Chlorophyll atz* (Chl *atz*)  
 127. *Chlorophyll auz* (Chl *auz*)  
 128. *Chlorophyll avz* (Chl *avz*)  
 129. *Chlorophyll awz* (Chl *awz*)  
 130. *Chlorophyll axz* (Chl *axz*)  
 131. *Chlorophyll ayz* (Chl *ayz*)  
 132. *Chlorophyll ayz* (Chl *ayz*)  
 133.

**ALL**

STATE

5

STATE . ZIP CODE

(OR COUNTRY)
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**(OR COUNTRY)**

[illegible]

PRINT OR TYPE TITLES OF ITEMS YOU WISH TO RECEIVE ON A SUBSCRIPTION BASIS:

[illegible]

FOR OFFICE USE ONLY	
QUANTITY	CHARGES
.....	ENCLOSED .....
.....	TO BE MAILED .....
.....	SUBSCRIPTIONS .....
.....	POSTAGE .....
.....	FOREIGN HANDLING .....
.....	MMOB .....
.....	OPNR .....
.....	UPNS .....
.....	DISCOUNT .....
.....	REFUND .....